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AGRICULTURE AND ME

The Teacher's Handbook
on the Agriculture
Industry.

GRADE 2

Alberta
AGRICULTURE

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AGRICULTURE AND ME

A Resource Book for Teachers

Division 1

By

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ALBERTA AGRICULTURE

1987

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INTRODUCTION TO THE TEACHERS

Mom: (After child's first day at school)
What's the matter?

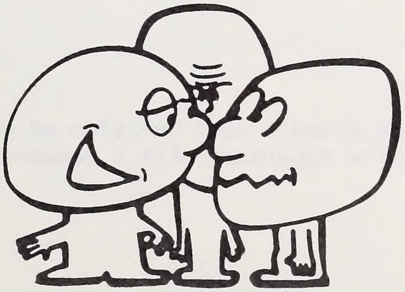
Child: Well it's not much fun. I can't read;
I can't write; and they won't let me talk!

- Author unknown

The above exchange reveals children's expectations that in school they will learn to read and write and that they will talk. Certainly in the activities of this handbook children are expected to read and write, and most of the activities accommodate and encourage talk as a means of exploring or sharing ideas about agriculture.

The need for this handbook stems from the fact that agriculture provides jobs to a significant number of Albertans and it provides essential products and services to all the rest of us, yet many of us are unaware of the scope and nature of the agriculture industry in our province. In addition many of us retain misconceptions about farming. This handbook is part of a response to these facts. Agriculture and Me is one of four handbooks which will subsume all four divisions grades 1 - 12. In turn these materials are part of an agriculture-in-the-classroom movement across the continent. The movement originates among farm people and others involved in agriculture whose aim is to help increase awareness about agriculture by providing resource materials for teachers.

Agriculture and Me is for those of you who teach in Division I. It suggests forty-six activities which you can use to help children increase their agricultural awareness. Our aim in preparing the handbook has been to suggest activities that will be fun for children and will encourage them to begin to develop up-to-date notions of what farming is; also to begin to recognize what else agriculture is, in addition to farming - the network of interrelated services and businesses that are associated with farming. Through the activities children have opportunities to discover the ways in which their lives and welfare are affected by agriculture.



While the focus of this handbook is on agriculture which relates to many social studies and science topics, we have selected activities with children's language development in mind. Our aim has been to suggest activities that allow for extensive use of language, both for learning and for sharing or communication. As well, we intend that the activities allow children to enjoy language and to develop increasing appreciation of and interest in it - attitudes critical to language development itself.

In many of the activities we have suggested group work. This takes into account the increasing amount of educational research that recognizes the essential role of social context in language development. Group work also allows the children to mobilize and refine their own knowledge through talk. Finally of course, group work allows the children to help each other and to develop attitudes of cooperation and acceptance so important in learning and living.

While we have related the units to the provincial curriculum guide for language arts, which offers separate objectives for grades 1, 2, and 3, the handbook is a flexible resource. You will be able to adapt many of the activities for use with children at any point of development in primary school. This adaptability is consistent with the philosophical framework within which you work; it acknowledges the need for continuity and articulation among various learning experience of young children. The adaptability also is consisent with the fact that you are in the unique position to know what is possible and desirable for your children and comfortable for you in your particular circumstances.

FORMAT OF THE HANDBOOK

Activity Outlines

The activities in this handbook have been grouped into nine units. The introduction to each unit offers a brief overview of the theme and general objectivies for the group of activities in that unit. Individual activities have been written in a standard way and each one includes the following sections:

1. Activity Number - orders the activities which typically occur in groups of five and are presented by grade levels as follows:

2. The handbook is produced in 3 separate sections:

Section 1	Grade 1 - Activities 1 - 15
Section 2	Grade 2 - Activities 16 - 30
Section 3	Grade 3 - Activities 31 - 46

3. Title - suggests the purpose of the activity.

4. Study Question - a question to focus the activity; try to answer it before going ahead.

5. The Activity - a concise statement of what children do.

6. Curriculum Areas - a precise reference to curriculum statements found in your provincial curriculum guides for Language Arts, Social Studies, and Science.

7. Materials - a list of materials you will need for the activity.

8. Procedure - a brief description of suggested steps to follow in introducing, carrying out, and concluding the activity; marginal notations highlight the steps and reflect the curriculum areas.

9. Related Activities - additional activities that grow out of the main activity but may require additional resources as well as time.

Resource Sheets

Interspersed with the activity outlines are several types of materials that you may find helpful:

- pictures
- information sheets which provide some background for the activities
- samples of student activity sheets

Feel free to copy any of these. Some additional relevant materials can be obtained from the Department of Agriculture. Drop by or write to the following address:

Alberta Agriculture
Publications Office
7000 - 113 Street
Edmonton, Alberta
T6H 5T6

Some films also can be obtained from Alberta Agriculture. For information or to request a film catalogue write to the following address:

Film Library
Communications Division
Alberta Agriculture
7000 - 113 Street
Edmonton, Alberta
T6H 5T6

Glossary

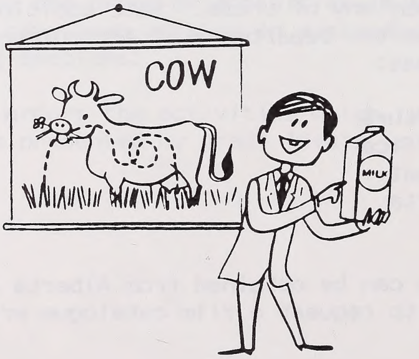
The glossary lists words by categories - e.g. farm plants, farm equipment. Words are alphabetized within each category. We have included some words which are fairly common so as to point out their uses in an agricultural context. The glossary is contained in Sections two and three.

Curriculum Chart

The curriculum chart shows which content areas of Social Studies and Science are emphasized in particular activities; also what types of language arts activities are involved. The wording of the curriculum guides is used in the activity outlines.

FINAL COMMENTS

The preparation of this handbook has been an enjoyable way of reinforcing our awareness of the central place of agriculture in the lives of all of us in Alberta. We hope that you find these activities useful and that you enjoy doing some of them with your students. We look forward to your comments and to your suggestions on ways we might improve this book.



ACKNOWLEDGEMENTS

In writing this handbook I have received help from a large number of people. Though space does not allow me to specify each person's contribution, I would like to at least mention the people whose support I have valued so much.

First I want to thank Warren Wismer and Betty Gabert for the opportunity to work on this project that I endorse so strongly. As well, I want to thank Dr. Grace Malicky of the University of Alberta who put me in touch with Alberta Agriculture and thereby initiated an association that has been very interesting and enlightening for me.

I want to than Betty Gabert not only for bringing me into the project but also for being the best kind of editor I could imagine. She has understood my needs and responded to them directly and thoughtfully. She has given me suggestions and perceptive criticism, which reflect her very comprehensive understanding of our project and of the perspective of teachers in classrooms. And she has demonstrated faith in me. Her leadership and collegiality have made my work productive and very pleasurable.

Another colleague who has offered steady support is Gabe Boulet. I have appreciated his thorough responses to my questions about agriculture and I have enjoyed the many talks in which my questions led to fascinating explorations about agriculture. These discussions have fed both my writing and my enthusiasm.

I appreciate the staff I have worked with at Alberta Agriculture, especially Joyce Gingerich whose endless patience and good humor and her skill on the word processor have allowed me to move easily through a number of drafts on this handbook.

Several teachers have been generous enough to read parts of my drafts and to offer comments from a classroom perspective. That was essential and I have appreciated it very much.

While working on this handbook I visited a number of farms around Edmonton. I appreciate the generosity of the farm people who shared their time and their experiences with me. I also greatly appreciate the co-operation of a number of people in agriculture who arranged for or prepared material about life on various types of farms.

Finally I want to thank my friends and family members who have generously offered suggestions and information as well as continual encouragement. Their curiosity, their prompts, and their praise have helped make this project a tremendous delight for me!

N.H.
December, 1986

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LIST OF RESOURCES

UNIT 4 - ANIMAL GROUPS IN AGRICULTURE

Patterns for Animal Mobiles
A Day in the Life of a Sheep Dog
A Special Birthday Party (Note to Teacher)
A Special Birthday Party (Drawings)
Cheese Making (Information Sheet)
Dairying in Alberta (Pictures)
Crossword Puzzle: Farm Animals (Answer Sheet)
Crossword Puzzle: Farm Animals
Jigsaw Puzzles: Farm Animals

UNIT 5 - FARM LIFE: RURAL AND URBAN SETTINGS

City and Country Living: Bird's Eye View (Pictures)
Density of Population (Chart)
Life on a Farm (Written sketches)
Vacation on a Farm (Information Sheet)

UNIT 6 - PLANTS AND FOOD

Crops of Alberta (Information Sheets)
Log Sheet: Growing Plants
Brainstorm: Semantic Map
Focussed Brainstorm (Semantic maps)
Plants Quiz
Plant Rhymes
Date Sheet: Plant Products Used in Baking

CURRICULUM

CONNECTION

CURRICULUM CONNECTION: 2

Activity Number	Major Agricultural Concepts	Curriculum Connection: Social Studies	Curriculum Connection: Science
	Unit 4 - Animal Groups in Agriculture		
16	Farm animal.		
17	Animal worker.		Describe and classify animals.
18	Farmer as caretaker.		Develop a respect for living things.
19	Food processing; dairying.		Observe changes that occur in a regular pattern.
20	Farming; farm animal.		
	Unit 5 - Farm Life: Rural and Urban Settings		
21	Section (of land).	Exploring my own neighbourhood	Infer the consequences of man-made changes in the en-environment.
22	Agricultural landmark.	Exploring my own neighbourhood	Identify various parts of an enviroment and infer their interdependence.

CURRICULUM CONNECTION: 2

Language Arts Area				Curriculum Connection: Language Arts	Activity Title
Listening and Viewing	Reading Viewing	Speaking	Writing		
Unit 4 - Animal Groups in Agriculture					
				Follow directions; share information in conversations and in reports.	Making Mobiles
				Identify details; read lists and pictures; report.	Animal Workers
				Read pictures and stories; identify sequence and write story endings.	A Special Birthday Party
				Read pictures; identify details; form questions.	How we Make Cheese
				Develop vocabulary; identify words in writing.	Crossword Puzzle: Farm Animals
Unit 5 - Farm Life: Rural and Urban Settings					
				Discuss observations.	Squeezing Together - Spreading Out
				Form sensory images; identify and recall details.	Agricultural Landmarks in Your Neighborhood

23	Farm; farming; farmer.	Canadian Communities Today.	
24	Farmer.	Canadian Communities Today.	
25	Farm; farming; farm life.	Canadian Commuunities Today.	
Unit 6 - Plants and Food			
26	Agricultural plant; seasonal change.		Observe and describe characteristics of plants.
27	Germination; plant growth; crop production.		Observe and describe stages in growth of plants.
28	Food processing; agricultural product.		Classify plants in various ways.
29	Agricultural plant.		Describe and classify plants in various ways.
30	Plant product; food processing.		Observe matter undergoing changes.

	Read reports; report observations.	Farmer For A Day
	Read reports; write in a journal; dramatize a character sketch.	Family Portraits: Farmers
	Prepare and read brochures; share experiences.	Vacation on a Farm
Unit 6 - Plants and Food		
	Share ideas in conversations; write interpretive inscriptions.	Make a Calendar
	Write charts; report observations.	Growing Plants
	Read pictures and paragraphs; use context to predict words.	Take a Plants Quiz
	Read verses; use context to predict rhyming words.	Plant Rhymes
	Read recipes; follow instructions; write charts; share experiences in conversations.	Bake Sale

Unit 4 - Animal Groups in Agriculture

INTRODUCTION

This unit focuses on particular groups of farm animals. The activities lead the children to identify various kinds of animals involved in farming and to study selected groups in some detail. Our intent is that children come to recognize the importance of animals to agriculture. The activities help the children see that some farm animals are workers while some are pets or sources of agricultural products. In addition the activities help the children increase their appreciation of the relationships between farmers and the animals they care for. The notion of a farmer as a caregiver is basic to the unit, as is the notion of interdependence between a farmer and his animals.

The following general questions reflect the focus of this unit.

1. What are the special characteristics of selected farm animals?

2. What are these animals valued for?

3. How are they cared for?

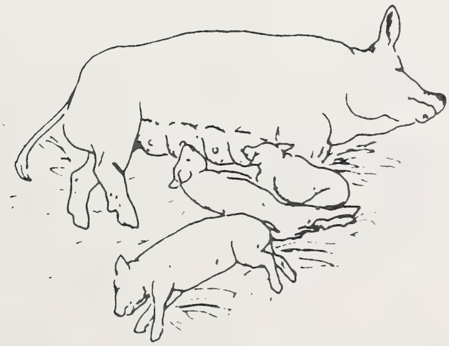
OBJECTIVES

1. To identify characteristics of some of the types of animals found on Alberta farms.

2. To recognize the different roles played by different animals on a farm - workers, pets, stock.

3. To recognize the importance of the farmer's role as caregiver.

4. To identify the stages in the production of selected animal products.



Activity 16

MAKING MOBILES

STUDY QUESTION Which farm animal will make the best mobile for your house or classroom?

THE ACTIVITY

In this activity, children sew animal shapes on cardboard frames and cut them out for mobiles.

CURRICULUM AREAS

Language Arts

- Communicate orally using various forms: directions, conversations, reports.
- Use appropriate forms of written language: paragraphs.

MATERIALS

- Dot patterns for sewing animals onto cardboard.
- Needles, thread of various colors and textures, scissors, string.

PROCEDURE

Preparation

Using the patterns provided, make sewing forms of cardboard. Let each child select an animal; make multiple forms for each child according to his or her design for a mobile. Glue copies of the patterns onto light cardboard for sewing.

Conversing

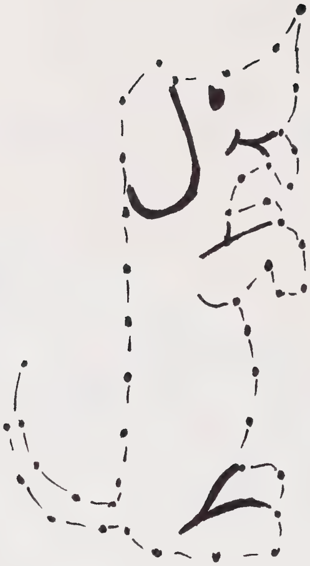
Have each child make an animal mobile using cutouts of their sewn animal forms. Let the children who have selected the same animal work together, to both help each other and converse with each other about the features of their animal. Some children may want to work together on a single mobile.

Conclusion

Display the mobiles and have the children tell about them.

RELATED ACTIVITIES

1. In their groups, have the children research the characteristics and care of their particular animals. Encourage them to share their findings when telling about their mobiles.



Activity 17

ANIMAL WORKERS

STUDY QUESTION Do you know any dogs that are workers?

THE ACTIVITY

In this activity the children identify and explore the regular tasks of a sheep dog.

CURRICULUM AREAS

Language Arts
- Read a variety of materials: lists.

Science
- Plants and Animals: Describe and classify animals in various ways.

MATERIALS

- Information sheet on the work of a sheep dog.
- Photographs of sheep dogs in action.

PROCEDURE

Preparation

Discussion

To introduce the idea of a dog as a worker ask the children who have pets to tell what jobs their pets do. Some dogs, for example, are seen as watchdogs, not just pets; some are used as police dogs or seeing-eye dogs; some also are viewed as companions. Relate this discussion to the historical use of animals such as horses and oxen for transportation, and construction work (hauling loads etc.) as well as farming.

Reading

Read the sheet about a sheep dog's duties, discussing each item briefly. Use the pictures to help the children visualize the dog in action.

Making a collage

Have the children work in groups to illustrate the various jobs of the sheep dog. Use the illustrations for a collage and agree on a title for it.

Conclusion		Have each group briefly comment on their part of the collage. Highlight the importance of animals to a farmer - the help he gets in return for taking very good care of these animals.
RELATED ACTIVITIES	1.	Write individual stories that involve other animals who work for their masters or write an outline for a day in the life of another animal.
	2.	Read stories about farm pets or animal workers - e.g. Only One Wolf, by James Herriot. London: Pan books Ltd., 1986

Bliss is a working mother.

A Day in the Life of a Sheep Dog

Sheep dogs run up to thirty miles in the course of a day. They are loyal and tireless workers, seldom becoming bored with their jobs. Here are some of the tasks of a sheep dog.

1. Herds sheep from pen to pen.

2. Takes sheep from pens out to pasture.

1. Follows the farmer during feeding and helps control sheep at the feeders, to prevent chaff from getting into the fleece of the sheep.

2. Guards gates when they are open for moving machinery, to prevent sheep from escaping.

5. Brings sheep up the chutes for medical treatment or sorting.

6. Rounds up sheep who have run away from home to graze on a neighbour's grass.

7. Brings sheep in from pastures unassisted.

8. Is a loving companion to a farmer.

Creed moves in. Can he get the sheep into the pen?

Jeff did a good job - now he can leave the course with his master.

Both horses and Dogs help ranchers with their cattle.

Activity 18

A SPECIAL BIRTHDAY PARTY

STUDY QUESTION What is a newborn animal like?

THE ACTIVITY

In this activity the children arrange sentences to match pictures and to make a story about an event that is somewhat unique to farm life.

CURRICULUM AREAS

Language Arts

- Read a variety of materials: pictures, stories.
- Use appropriate forms of written language: story ending.

Science

- Plants and animals: Develop a respect for living things.

MATERIALS

- Series of drawings about a little girl's birthday party.
- Scrambled list of sentences to accompany the drawings.
- Teacher's information sheet.

PROCEDURE

Reading pictures

Introduce the activity with a brief sharing of experiences children may have had with baby animals or with pets having babies. Then as a class, look at the series of drawings about a little girl's birthday party at which a calf is born. Through discussion, develop an oral script for the story.

Identifying sequence
Predicting outcomes

Distribute copies of the sentences that accompany the drawings. Have the children read them individually then work in pairs to arrange the sentences and write individual endings for the story.

Conclusion

Have the children share their responses to the story noting that farm people watch their animals closely and often help when baby animals are being born. Have the children pick a name for the "birthday" calf.

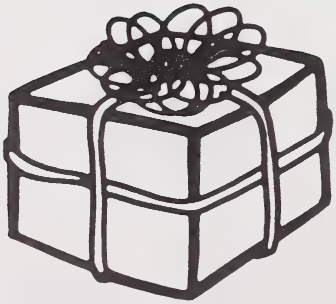
RELATED ACTIVITIES

1. Have the children write stories about animal babies based on their experiences with their own pets or classroom pets.
2. Read books about animal babies.
3. Act out the story.

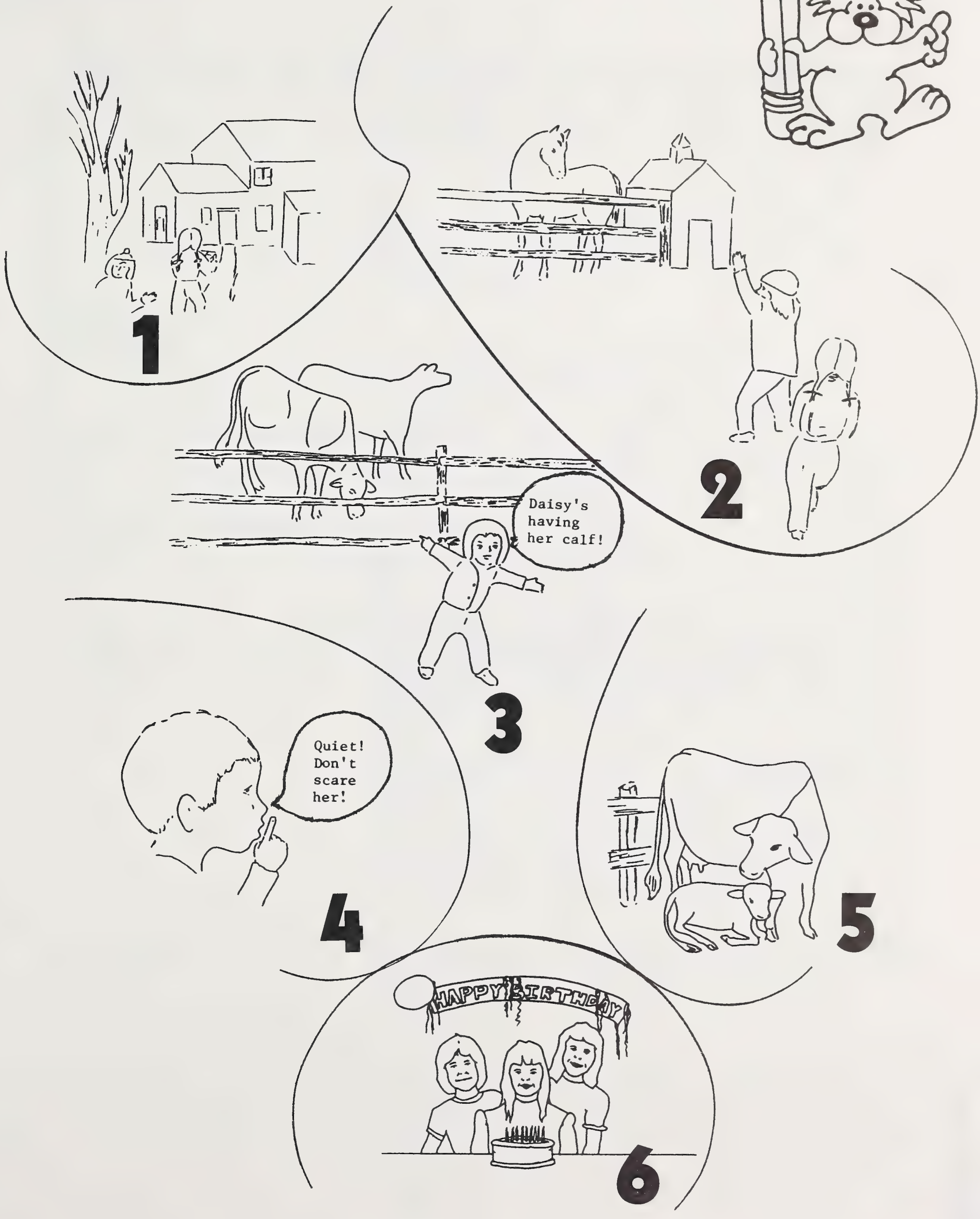
A SPECIAL BIRTHDAY PARTY FOR CATHERINE

To The Teacher: For some children who live on farms, it is not uncommon to witness the birth of animal babies. In fact sometimes children are involved directly when their parents help an animal during a birth. The experience allows children to appreciate the kind of bonding that is characteristic of some animal families - as in one child's whispered exclamation to his mother as he watched a sheep cleaning her new lamb: "She loves it, Mom! "

The series of drawings and the narrative suggested in the accompanying sentences are based on a real event. We hope that in this activity the children can share some of the awe that a farm child might experience at a birthing event.



A Special Birthday Party For Catherine



A Special Birthday Party

Decide which sentence explains each drawing and number the sentences from 1 to 6. Write an ending for the story. Sentences 1 and 6, are numbered for you.

________ On the way to the pasture, the children pass the corral where cows are kept. Catherine notices that a calf is being born.

___1___ Catherine is having a party for her ninth birthday.

________ When mother come's back to the corral to see the baby calf, she sees Daisy and her new calf.

________ Catherine's friends want to see her horse, so they all start off for the pasture.

________ Catherine's friends want to go over to the corral to see the baby calf. Billy reminds them to be gentle and quiet then runs off to get Catherine's mother.

___6___ Catherine blows out her birthday candles. ________

____

____

____

____

____

____

____

Activity 19

HOW WE MAKE CHEESE

STUDY QUESTION What is your favourite cheese and where is it made?

THE ACTIVITY

In this activity, children visit a dairy or cheese company or interview a guest from one.

Note: If a dairy is not accessible do this activity in relation to a different farm animal, e.g. How we make wool or honey; how eggs are marketed.

CURRICULUM AREAS

Language Arts

- Communicate orally: conversations, interviews.
- Use appropriate forms of written language: questions, letters, simple charts.

Science

- Order and time: Observe changes that occur in a regular pattern.

MATERIALS

- Fact sheet on cheese making.
- Pictures on dairying.

PROCEDURE

Arrangements

If possible, arrange for a visit to a cheese company, a dairy, or a dairy farm; alternately, invite a representative to visit your class to talk about the processing of milk.

Writing questions

In preparation for the visit study the pictures of dairying and list some of the questions the children want to ask about the way cows are milked by machine, how the milk gets from the farm to a dairy, or how certain dairy products such as cheese are made.

Interviewing

Have the visit. If possible bring back samples of cheese. (If a guest comes into the class, consider inquiring whether samples can be brought.)

Conclusion

If cheese samples have been brought back, have a tasting party when the children can compare flavours and pick favourite cheeses. Review the visit, emphasizing that mechanization allows a farmer to specialize in dairying and to work with a larger herd than he could otherwise.

RELATED ACTIVITIES

1. Have the children explore their impressions and learnings in their journals. On the basis of these reflections, have them collaborate on a thank-you letter to mail.

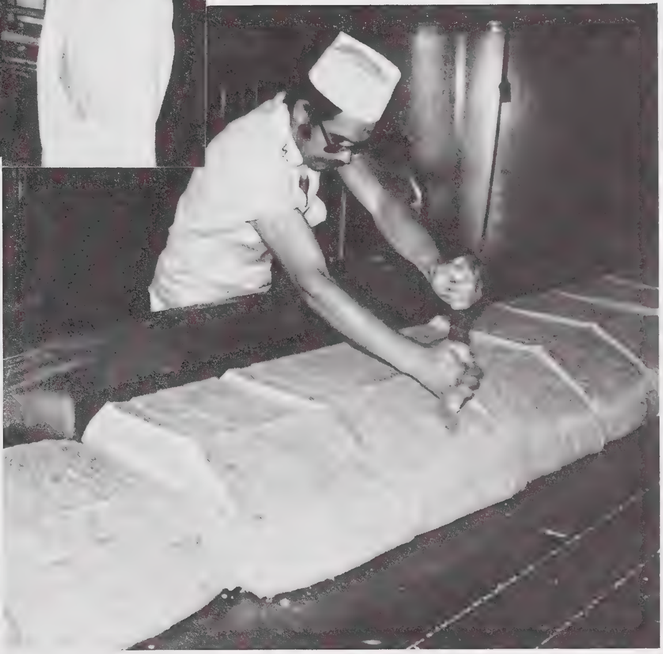
2. Make a large flow chart depicting the processing of milk into cheese.

3. Have a listing competition: how many dairy products can you list in a minute?
Have the children group the items and prepare posters to advertise selected dairy products and their health values. Post them in the school for a week.

Cheese Making

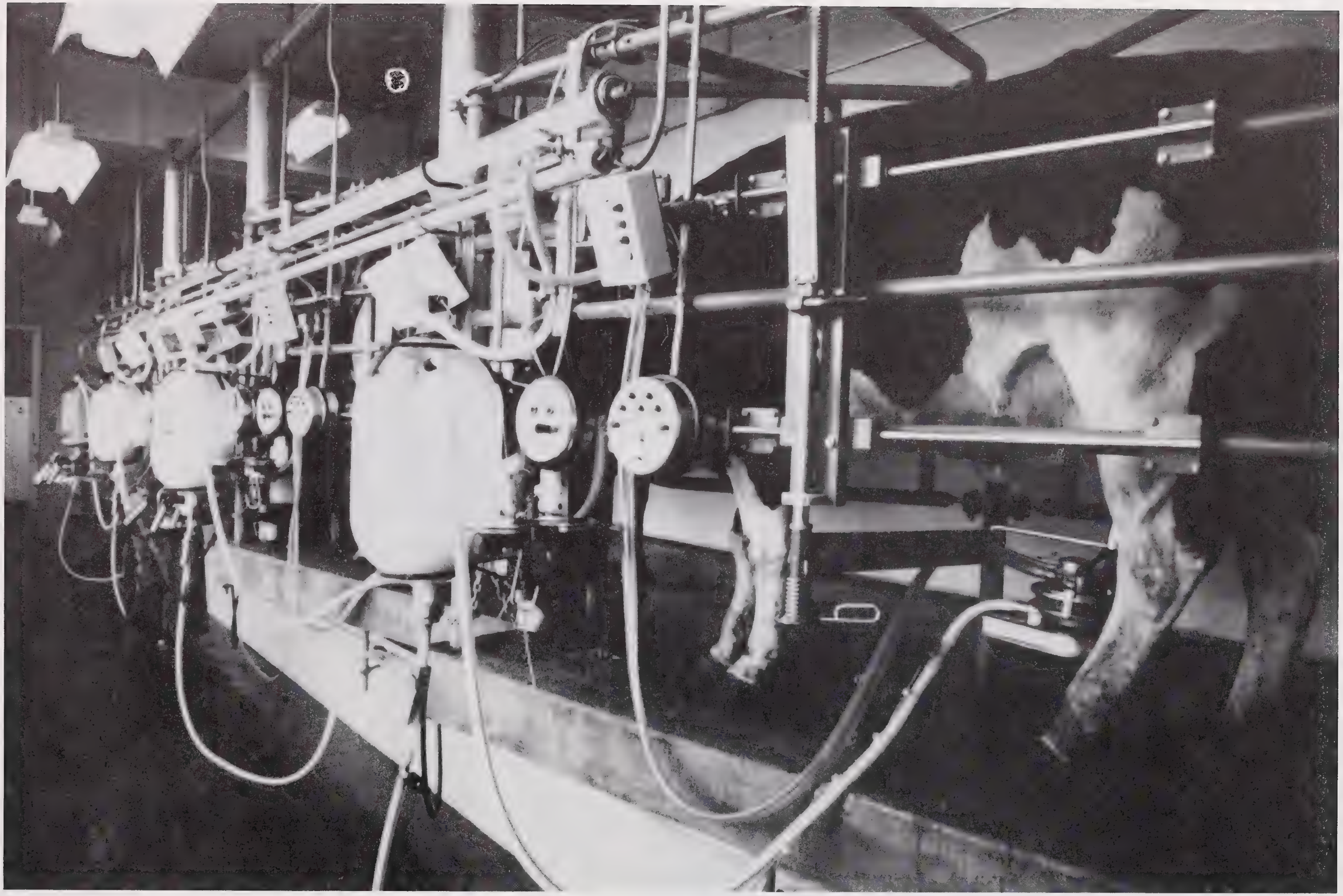
IDEAS

When milk is cooked, together with rennet, it coagulates. Whey is expelled leaving "curds" and "whey". Here the curds are being piled, allowing whey to escape.



The piled curd is allowed to mat. It is cut into loaflike portions and turned every so often. The curd becomes smooth and silky. This chemical process is called "cheddaring" after the village of Cheddar, England, where cheesemaking was going on as early as the 1700's.

Cheese making began in Canada in 1864, when a cheese factory opened near Ingersoll, Ontario. Since then over 1500 factories have sprung up across Canada. Alberta cheese factories make over 20 kinds of cheeses.



Dairy cattle are milked in a modern milking parlor. The milk goes directly from the cows through the pipeline to the storage tank in an adjoining room. Some of the milk is shipped to a cheese factory.

Activity 20

CROSSWORD PUZZLE: FARM ANIMALS

STUDY QUESTION How many words do you know about farm animals?

THE ACTIVITY

In this activity students do a crossword puzzle related to farm animals.

CURRICULUM AREAS

Language Arts

Develop vocabulary.

MATERIALS

- Glossary.
- Crossword puzzle.

PROCEDURE

Using a glossary

A "defining bee"

Make copies of the glossary for the children to refer to. Demonstrate and have them practice its use on a number of the words related to farm animals and care of animals. To review additional words split the class into two teams and have a "defining bee" analogous to an old-fashioned spelling bee; for each word you pick out, the first person to find it in the glossary and define it earns a point for his or her team.

Predicting words

Make the puzzle available to the children, perhaps at an activity centre where they can work on it individually or with classmates. Encourage them to use their glossaries to check their guesses.

Conclusion

At a specified time review the words by brainstorming and categorizing words children associate with farm animals. Discuss any questions that may arise about the words.

RELATED ACTIVITIES

1. Compose riddles about animals, using the information in the puzzle.
2. Do jigsaw puzzles on farm animals.

Crossword Puzzle:

Farm Animals

```
               6           8
      1  7     b  a  r  n  s
      c        e        9  h  e  n
2  w  o  r  k  e  r        e        11
      w     i          10  e  g  g  s
      4     t              p        t
   5  c  a  t  s                    r
      o     e                       a
      l     n                       w
      t
```

Down

1. She gives milk

3. A baby cat.

4. A baby horse.

6. It makes honey.

8. It gives us wool.

11. It is used as bedding for some animals; it is left when seeds are threshed from grain.

Across

2. A pet that helps the farmer.

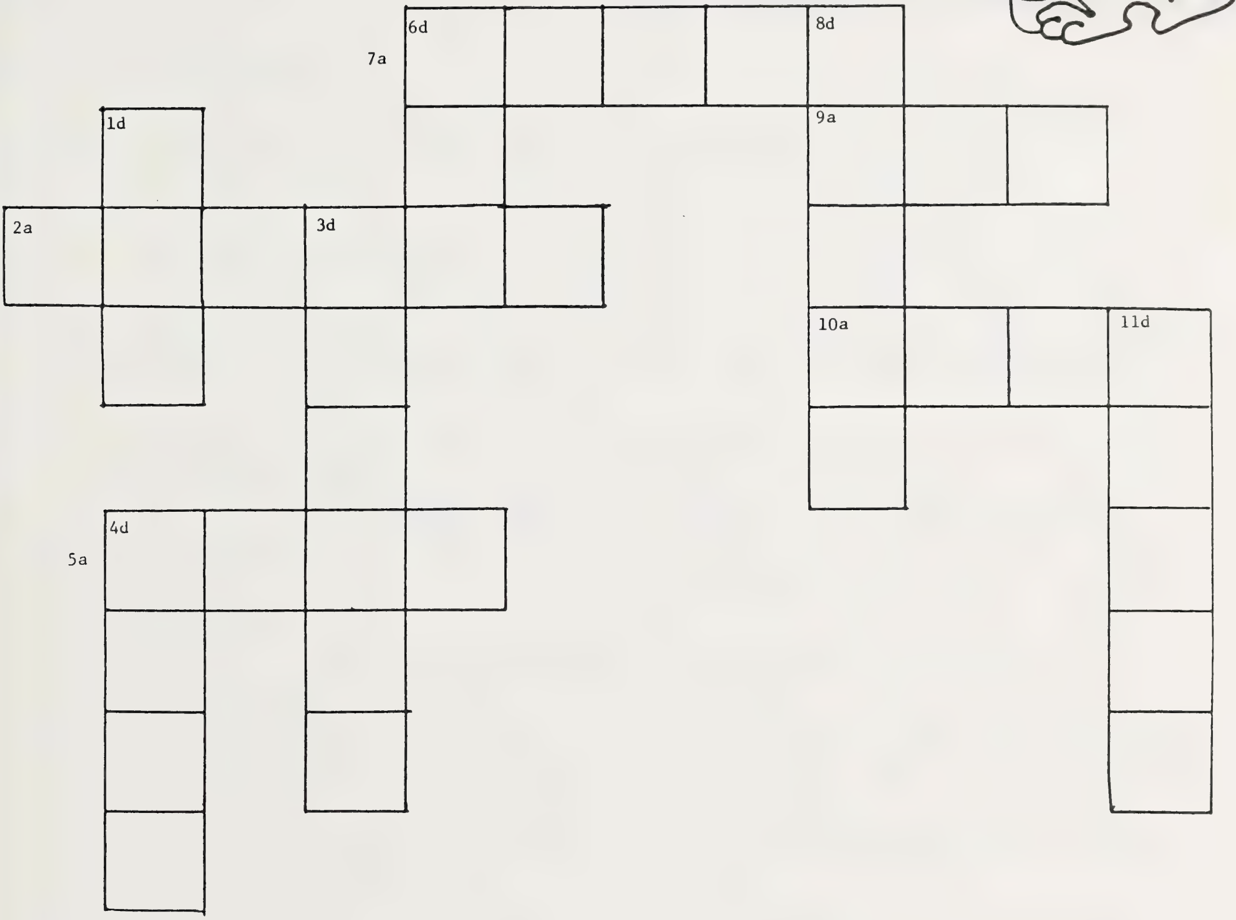
5. These animals catch mice.

7. These buildings provide shelter for animals; these are the buildings where cows are milked.

9. She lays eggs.

10. Chicks and goslings hatch out of these.

CROSSWORD PUZZLE: FARM ANIMALS



Down
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2. A pet that helps the farmer
5. These animals catch mice
7. These buildings provide shelter for animals; these are the buildings where cows are milked
9. She lays eggs
10. Chicks and goslings hatch out of these

Unit 5 - Farm Life: Rural and Urban Settings

INTRODUCTION

This unit offers children opportunities to examine rural settings for farm life and the roles and interdependences among family units and family members. In the activities of the unit children will examine use of space in rural and urban areas and will have opportunities to reflect on the tasks and relationships of family members. The intent is that children begin to recognize both contrasts and relationships between life in rural and in urban areas. The unit also introduces the idea that farming can occur in a city, where agricultural goods such as vegetables are produced commercially and that farmers may live and sometimes work in cities. The following questions suggest a frame of reference for the activities in this unit:

1. What are some similarities and differences between life in rural and urban areas?
2. How does space affect the lives of people in rural and urban areas?
3. What are some of the specific roles played by members of farm families?

OBJECTIVES

1. To recognize the extent to which agriculture is apparent in any community.
2. To compare the density of population in selected rural and neighboring urban areas.
3. To appreciate the different effects of space on the living patterns of country and city people.
4. To recognize the variety of roles played by farm people both on and off their farms.

Activity 21

SQUEEZING TOGETHER - SPREADING OUT

STUDY QUESTION: Do you have lots of space for working and playing?

THE ACTIVITY

In this activity children define a section of farmland in terms of a city block. Note: In this activity, metric measures are not used because the focus is on roadways which still mark off miles and acres.

CURRICULUM AREAS

Language Arts	- Communicate orally: discussions; conversations
Social Studies	- Planning neighborhoods: Exploring my own neighborhood; Canadian communities today.
Science	- Environment: Infer the consequences of man-made changes in the environment.

MATERIALS

- Aerial views of a city residential area and of a farmstead and surrounding land.
- Chart showing sections of land and crossroad; broken lines to show a city block.

PROCEDURE

Introduce the notion of density of population by having the children each take one balloon out of a small box. Have the children blow up their balloons and note how much more space they take up.

Comparing

Relate the comparison to the contrast in population density in rural and urban areas. Refer to the chart which shows one city block block relative to a couple of sections of land. Have an enlarged chart on the board. Estimate the number of people living in a block in a residential area of a town or city and have the children put that many dots into the little square on the chart.

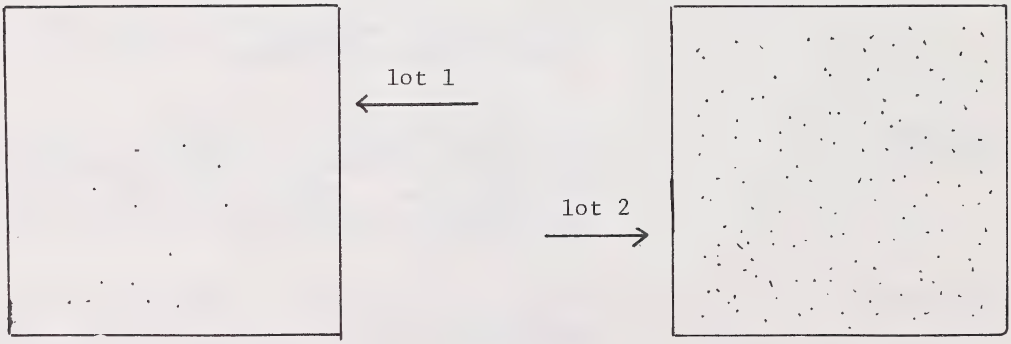
Conclusion

Briefly discuss the contrast, reflecting on the much greater number of people living in a town or city block and in a similar amount of space in the country. Briefly also discuss the influence of this difference on the people living in each kind of place.

RELATED ACTIVITY

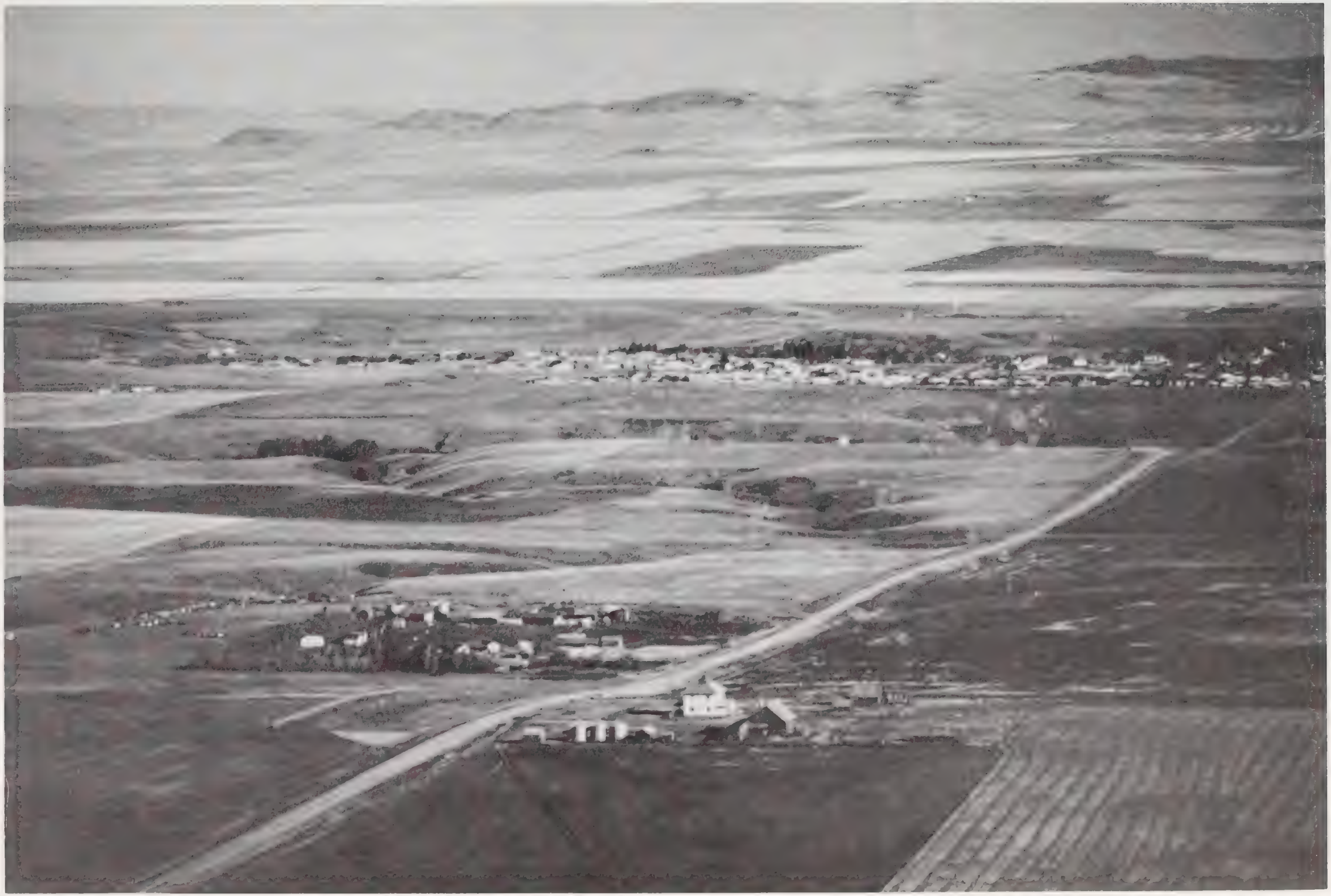
1. To reinforce the contrast in space between country and city residential areas, have the children estimate the following items for a country child and a city child:
   - The distance traveled by a parent to bring 10 friends together for a birthday party. Use as an average farm size 800 acres or $1\frac{1}{4}$ sections.
   - The total distance travelled by the children in the class coming to school: "x" total blocks in the city or "x" total kilometers in the country.
   - The area required to gather enough players

2. If the school is in a town or city take a walk around one block in a residential area. Count the number of buildings on the block and note the different kinds - e.g. house, apartment. Work out the approximate number of people on the block. After the walk make a diagram of two separate lots, one with a single-family dwelling on it and one with an apartment on it. Show the number of people on each lot.

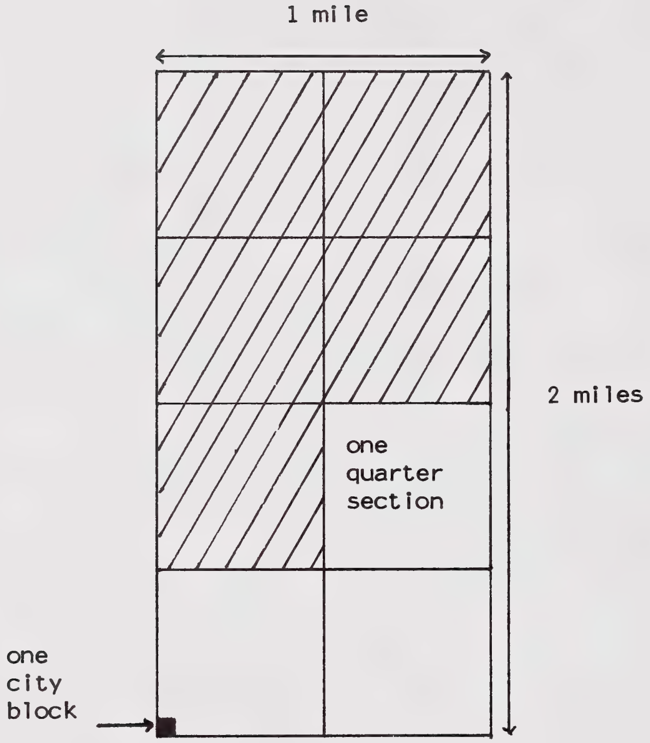


Use the diagram to define density of population as the number of people per unit of space and relate this notion to rural and urban living.

URBAN AND RURAL LIVING: BIRD'S EYE VIEW



Density of Population



In rural Alberta, crossroads occur every 2 miles north and south, every mile east and west.

The average size of farms in Alberta is 1¼ sections, illustrated by the shaded area in this diagram.

Activity 22

MAPPING YOUR NEIGHBOURHOOD

STUDY QUESTION: How does your community look from the air? What landmarks would you see that relate to agriculture?

THE ACTIVITY

In this activity children identify agricultural landmarks in their community.

CURRICULUM AREAS

Language Arts
- Associate visual and auditory information: recall details.
- Read a variety of materials: pictures, lists.

Social Studies
- Planning neighborhoods and local communities: Exploring my own neighborhood.

Science
- Environment: Identify various parts of an environment and infer their interdependence.

MATERIALS

- Aerial photographs of city and country residential areas.

PROCEDURE

Preparation

Identify a small section of your community where your class can go for a walk and see a number of commercial buildings or other landmarks. Select an area of several blocks.

Orientation

As a class examine the aerial photographs of Alberta communities. Then ask the children to imagine how their school and its immediate neighborhood looks from the air.

Observing

Take a walk around the section of your community that you have selected, to identify major landmarks and their spatial relationships to each other. Note which ones have some connection with agriculture - e.g. a bakery, a railway track, a vet's office, an elevator, a bank, a dairy plant, a foodstore, a lawn.

Conclusion

After the walk have the children recall the landmarks they saw. List them on the board. Mark those having some connection with agriculture and briefly discuss their significance to agriculture.

RELATED ACTIVITY

Have the children draw "aerial photographs" of the area covered in their walk, highlighting in green the agricultural landmarks seen. On the "aerial photos" compare the small area taken up by these landmarks with the relatively large areas of farmland surrounding a town.

Activity 23

FARMER FOR A DAY

STUDY QUESTION: If I follow a farmer around all day what will I see and do?

THE ACTIVITY

In this activity the children prepare overhead transparencies to illustrate farm settings and activities.

CURRICULUM AREAS

Language Arts

- Read a variety of materials: reports.
- Use appropriate forms of written language: illustrations.
- Communicate orally using appropriate language: explanation or commentary.

Social Studies

- Planning neighborhoods and local communities: Canadian Communities Today.

MATERIALS:

Information sheets listing typical daily activities of various types of farmers.

PROCEDURE

Introduce this activity by making a composite timeline suggesting the kinds of activities children do each school day. Raise a question about what a farmer may be doing during the same day.

Reading

Read together the data sheets about life on various types of farms. Have each child select an activity to illustrate. Group the children in some way - e.g. types of farms.

Drawing
Writing

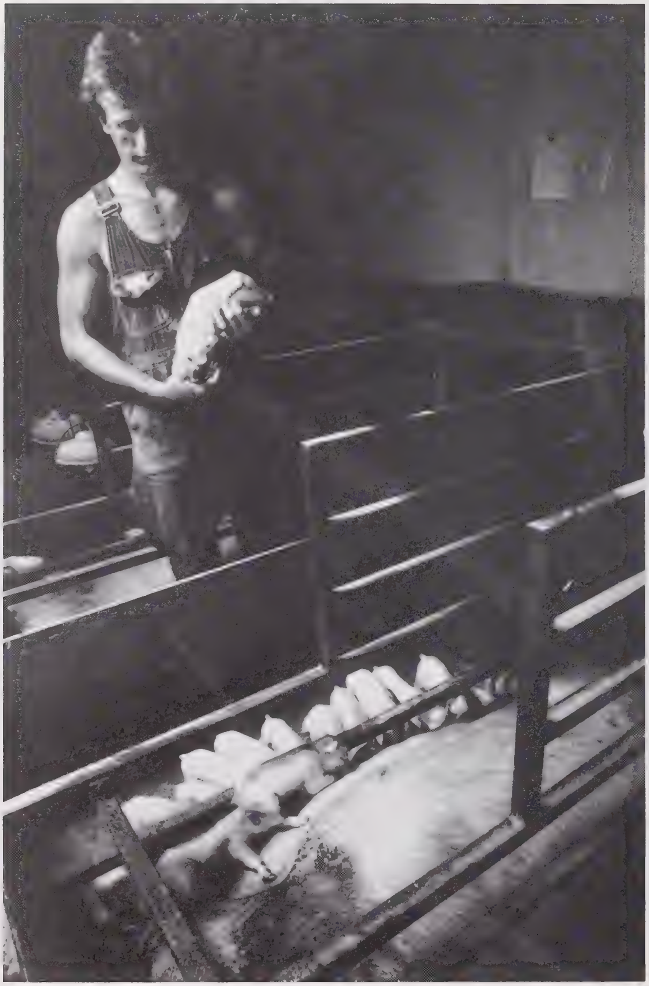
Ask each group to prepare individual illustrations with text, one by each child. Have each group plan a joint presentation or commentary that ties the separate scenes into a related series. Encourage the children to mention whether the activities are seasonal or occur every day of the year.

Conclusion

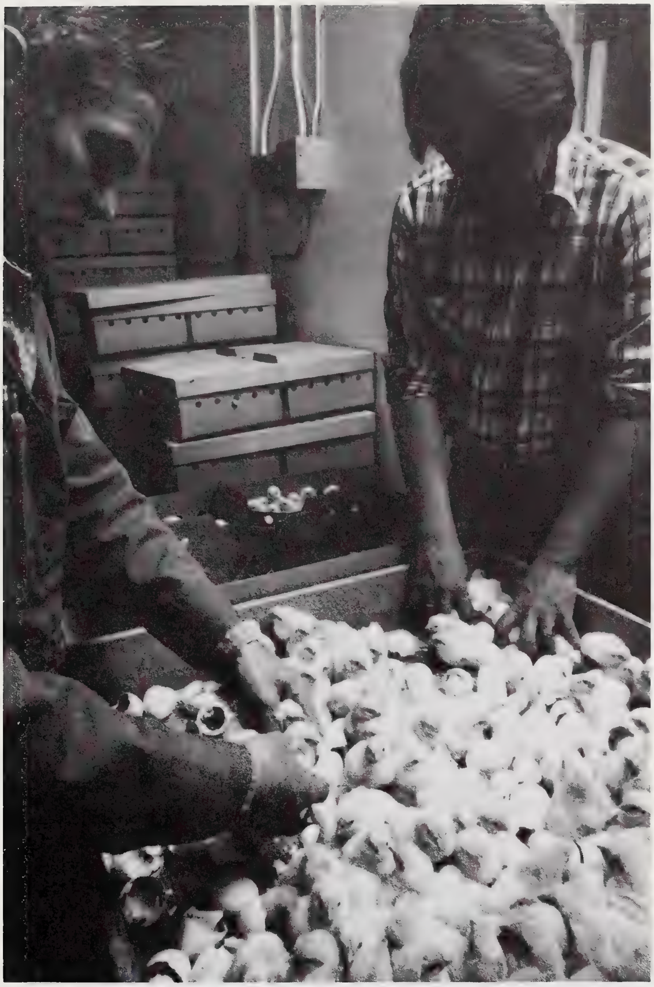
Share the presentations. Briefly discuss the show, allowing children to respond to the kind of life it depicts. Note that farm work changes with the seasons and encourage the children to reflect on these changes.

RELATED ACTIVITY

If the children have parents working away from home, which is possible in a rural setting but is particularly likely in a city class, have them do timelines and illustrations of their parents daily activities and compare these with the farm scenes. Have the children interview their parents if necessary.



A hog farmer checks his litter of piglets.



Chicken producers buy their chicks from a hatchery.

A dairy farmer empties the milking machine.

A Day on Our Hog Farm

Family members: Harvey (father)
Margaret (mother)
Christy (10 years old, Gr. 5)
Maria (7 years old, Gr. 2)
Colin (4 years old, preschool)

Our farm is a three family mixed farming operation. My husband farms with his father Frank, and his brother, Edward. Hence the family farm bank account is labelled: F.J. Rice and Sons.

7 a.m. The alarm goes off for our family at 7:00 a.m. at this time of year. After dressing and making their bed, Maria and Christy take turns practising piano in the morning. The other person feeds the fish and helps Mom to make the lunches - breakfast is at 7:30.

8:00
- The school bus arrives at about 2 minutes after 8. We usually have the radio on in the morning (tuned to CHQT in Edmonton) (if the weather is questionable, we listen to either CKRD or CKGy, Red Deer, for possible school closures) and when the eight o'clock news starts, its time that Maria and Cristy must be out the door for the bus. The school is 14 miles from our place in Lacombe town.
- Harvey has gone out to do the chores before the girls leave for school, because we are taking a load of pigs into Red Deer to ship. Yesterday Edward and Harvey weighed the pigs and tattoed the market weight ones. This morning, these have to be loaded into the truck, after the pigs have all been fed. The truck holds approximately 35 market weight pigs, some come from our barn and some from Edward's.
- When doing chores, Harvey also feeds 40 calves that were weaned from their mothers 2 weeks ago. He feeds them chop and hay. He also throws a couple of bales over the fence for our 4 horses
- Meanwhile, in the house, Colin and his Mom are hurrying to get things done so that they can be ready to go to Red Deer too. They clear off the table, make the beds, and have a race getting their clothes on. Colin wins. Then they feed the cats and their 2 outside dogs and put sunflower seeds in the bird-feeder. Brandy, the beagle, is fed in the house.
- It is 25 miles to Red Deer to take the pigs. They take a load about once every 2 weeks. When it is spring and fall, whoever takes the pigs must hurry back with the truck so that it can be used either to haul the seed grain or grain from the combine.
- After getting the pigs unloaded, we go to the UFA for some lumber and salt.
- While we are taking the pigs, Edward is feeding hay and bedding our 40 range cows.
- On the way home from Red Deer, we stop in Lacombe to pay some bills and do some banking and take some deer meat to be made into sausage at the butchers. Margie does some sewing. Colin is busy playing with his trucks and tractors, Harvey joins 2 neighbours to hunt for deer for the afternoon.

4:15 p.m. It's nice to have the girls home from school, the bus stops at about 4:15. After a snack they tackle homework and practising. Christy is completing several projects for her 4-H sewing club; she also works on them.

5:00 Harvey starts chores about 5:00 so that he is finished before dark.
Our son, Ryan, died 14 months ago. But, when he was alive and had a 4-H calf, he fed his calf every night after school. Harvey would feed it in the morning so that Ryan didn't go to school with that "barny smell." Christy just started 4-H this year. She didn't want a calf the first year but thinks she might next year
- Before bedtime there are stories, songs and prayers. Colin's bedtime is 7:45, Maria's about 8:00 and Christy's about 8:15.

Harvey

- president of the local hall society
- member of the church board in Lacombe
- member of UFA advisory board
- member of Unifarm

Margaret

- attends community playschool once a week with Colin
- leader of the 4-H sewing club
- sings in the church choir
- teaches 7 piano lessons and does some private tutoring and substitute teaching to supplement their income
- moniters once a month for Unifarm

Harvey and Margaret usually end the day by about 10:30

Submitted by:
M. R. Rice
R.R. #3,
Lacombe, Alberta

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A Day on Our Poultry Farm

Owners: John and Mary Koot
their two children, both teenagers, one boy and one girl.

- The Koot's have a poultry operation made up of three parts: a broiler operation with about 13,000 birds; a pullet operation in which they sell hens for laying and a layer operation with about 8,500 hens. They are rather large and fairly varied poultry producers.

7:00 - John gets up gets dressed and heads out to the barns to check everything to see how the feeders and ventilators are working, etc. This set of chores takes him about one hour and in the meantime the kids got up, got dressed and got ready for school and Mary has breakfast ready.

8:00 - John comes back in to the house and as a family they sit down and eat breakfast. They don't eat eggs which surprised me. Basically, they are a cereal and toast family. The kids board the school bus at 8:20 a.m. so they don't have a long time to eat so they don't sit around too long in the morning shooting the breeze.

9:00 - John is back out to the barns. At that time he gathers eggs and checks to make sure everything is working fine. He does any clean up and that sort of thing.

10:30- John is in for coffee. Both he and Mary sit down and have coffee together. They don't go into town for coffee. There are some farmers in the area that do that - head into town and to the cafe for coffee where they talk things over. But the Koots's family doesn't do that.

11:00- Quite often John will go into town for mail. At that time he takes in the equipment he needs to be repaired, he will pick up parts and things that they need from town for the farm and is home in a short time. They live about 5 miles from town so a trip is not a major time consumer.

We've decided to throw in a feed salesman because quite often
they do have such a salesman coming around because they do use
a tremendous amount of prepared feeds. So we thought that
11:30 we would have a feed salesman drop by because he is around
quite regularly. They know these salesmen quite well so they
will stay for lunch and do a little bit of business after
lunch and the feed salesman will be gone about 1:30 in the
afternoon.

1:30 - The afternoon is made up of various different chores that need to be done around a poultry operation. There is equipment repairs, there is bale handling. They use alot of straw bales so they might go out and pick up a load of bales and bring them home. They might do some work around the barns, cleaning the machine shed, repair and maintain all of the buildings that they have their poultry in. All of the poultry are indoors. They might end up getting ready for a broiler shipment which would entail getting the ramps lined up, gravel hauled in if the yard is muddy and that sort of thing.

- We've decided to throw in a broiler shipping. Broilers have to be loaded and shipped after dark so that in the summer it means we don't start shipping until about 11 or 11:30 at night. Because we are looking at about a 4 hour exercise to catch all those birds and put them into crates and on to trucks it is a major job. We're looking at about eight people. There are people in the district that sort of do custom work (if we want to call it that) as chicken catchers and John would normally have a crew of about eight people that would come in and catch and load chickens. It is about a four hour operation so if they are starting at 11 o'clock at night we would wrap up this chicken catching episode by about 3 a.m. at which time everyone comes in for coffee and lunch before they head home. During the winter, of course, it gets dark a whole lot earlier and we could have a chicken catching session starting about 6 o'clock in the evening running through to 10 and at that time the crew would come in for coffee and lunch at the Koot residence.

3:30 - Mary goes to town to pick up the kids. It may be worth explaining at this point that Mary is able to pick up the kids and be home by pretty close to 3:30 or 3:45. If the kids get on the bus in the afternoon they end up not getting home until 4:30 and because they have a chore of gathering the eggs again in the afternoon which takes about an hour and if they don't get home until 4:30 it puts them behind because they like to come in for supper at about 5 p.m. So Mary goes in and picks them up and by doing that she can save the two kids about an hour.

5:00 Everyone comes in for supper. Supper is their big meal of the day. They like to have it fairly early in the day because they are fairly active in the community they will be heading out either one or both or all of them for sports activities or for club involvement.

11:00 - An average night wraps up about 11 by watching the news and as soon as the news is over they head for bed.

A Day on Our Dairy Farm

Note: I found this to be very difficult to keep to a specific time of year or day. Our activities vary a lot because we grain farm as well, and have a beef feedlot.
We have 3 full time hired men, but if we had just dairy, we could probably manage with 1 hired man (a herdsman). Also our sons are getting bigger and soon will be helping more, therefore the hired help will not be necessary.

4:30 a.m - Time to get up for the milking.
- 2 men do the milking
- we milk approximately 100 cows every day all year
- cows are fed grain during milking in the 'milking parlor', which has 5 milking machines
- the radio is always on during milking, so the cows are more relaxed. This also gives the men a chance to hear the local weather and news.
- cows eat hay (alfalfa) and silage (barley) after milking.

7:00 a.m - Mom and the children rise and shine. Mom makes breakfast and packs school lunches. At this time, she also checks the daily schedule to see what is on the agenda for today. The children go outside to do their chores - feed 2 dogs, several cats, and about 20 rabbits (which they raise for pets). They make sure they are well bedded with lots of straw - especially in the winter time.

7:30 a.m. - Milking is finished and the milk truck is here to pick up 2 days of milk.

7:45 - All the family is in for breakfast.

8:15 - The men go back out to clean the barn, feed calves, and heifers, check cows calving (this happens year round on a dairy), breed cows that are in heat.
- Cleanliness is important on a dairy, so the milking parlor is scrubbed every day.

8:25 a.m. - Children catch the school bus. We live just three miles out of Lacombe where the children attend school.
- Mom starts tidying house, perhaps does a load or 2 of laundry

9 - 9:30 - Go to town for the mail.
- Depending on the season, rest of morning will be spent hoeing weeds or mowing lawns, picking garden vegetables, catching up on office work, driving to Red Deer for parts, or doing once a week grocery shopping in Lacombe.

10:00 - Coffee time - time to go through the mail and note which things have to be looked after right away. Mark down dates for meetings, appointments, etc.

Noon - Lunch time.

12:30 - 1:00 Rest time - we feel that a half hour nap will help prevent accidents.

1:00 - Men go back to work on machinery, continue harvest, grind feed for the cows, get a load of hay or straw, (depending on the time of year).
Mom tends to the garden, mending jeans, baking, or sometimes driving tractor.

3:00 - Coffee time - time to read the daily paper (Advocate)

3:30 - Time to milk cows again.

4:00 - Children arrive home from school. Mom starts organizing supper or driving for after school activities which include: music lessons, volleyball, softball, soccer, or working with 4-H calves (again depending on time of year). If all else fails, there is usually homework to do.

6:00 - Milking is finished and it's suppertime. Meals are always on time on a dairy.

6:25 - Watch weather report on t.V. and sometimes the news.

7:00 Summer - catch up on some more yardwork, fieldwork, (haying, silage making, combining, etc.)
Winter - evening curling (Dad, Mom and 2 children), skating: children have catechism at Church or girls and boys clubs; visiting, watching T.V., or meetings (EG, 4-H, Holstein Assoc. Milk Producers Assoc., etc.)

9:00 - Children go to bed.

10 - 11:00 - Parents go to bed - end of a long day!

Written by:

Lori Kamps
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A Day on Our Cattle Farm

Welcome to our farm. We grow grain as well as breed cattle and horses. This keeps us very busy all year round. I am a farm wife and mother of two teenage daughters. During the year, from April 1st until November 30, we employ two men who help us plant and harvest the grain as well as help with animal chores and maintenance around the farm. Everyone has something important to do.

Our day begins at 6:00 am, when our oldest daughter, Sandy, has to get up so that she can catch a school bus at 7:15 am which will take her for a 1½ hour ride to the High River school which is 30 km. Krista, who is 13 years old, must get up at 7:00 am to be ready by 8:05 am to take a 3/4 hour bus ride to a junior high school 15 km away. Both girls arrive home at 4:20 pm in the afternoon. They both have chores to do after school and they usually enjoy helping feed and look after the animals. In the spring they also have to groom and ride their horses each day to get ready for horse shows. When the men are very busy in the fields the girls and I have to keep the horse stall in the barn cleaned out.

Sandy and Krista also help plant and weed our large garden - which isn't always fun. Both girls know how to cook and often make cakes or cookies for lunches. They can also make dinner for me if I am busy or away.

I have to drive the girls to and from all school functions or to visit their friends because it is too far to walk or ride a bike and we don't have buses out here. Therefore they don't participate in all of the after school activities. Sandra especially enjoyed playing on the girls baseball team and Krista likes basketball. They both went to a girls club and took piano lessons also.

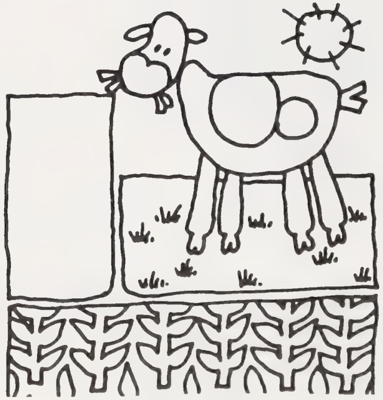
After breakfast is served and the girls get on the school buses I usually go outside to help my husband with the animals. Today I am going to tell you about our cattle. The busy time with our cattle begins in March when they are going to have their calves. When the cows are calving my husband and I take turns checking them every 2 hours during the night and day. We watch closely for any problems that might arise. Sometimes a mother cow has trouble delivering her baby and my husband & I have to help the cow and baby during birth. When a baby calf is born it is very wet so it is important that the baby has a dry place to lay. We put out lots of straw for the cows and calves to lay in. We also watch closely to see that the calf gets up soon after birth and drinks milk from it's mother to get strength and warmth. If the calf can't get up itself, then we have to help it and that can be both interesting and dangerous as some mother cows don't like people near their new babies. Sometimes, if a calf is born during a storm or very cold weather, it must be brought into the house to dry off and warm up. Even after the calves are a week old, and frisky and jumping, the farmer watches to make sure that there isn't any sickness because colds and flu spread quickly among calves just like in your classroom. The hardest work is over now. Usually by May the weather is warmer and the calves are healthy and on their own with their mothers care. At this time we give them vaccinations against disease and remove any horns and often they are branded also. In early June we hire a large cattle truck and haul the cattle to a summer pasture.

From June until November the cattle lead a lazy life wandering through the pasture and eating. During this time we check on them at least once during the week and make sure that they have salt and minerals, water and grass. We also have to make sure that the fence is in good repair and that the gates are kept closed so that the cattle don't get out.

By November the feed is usually gone and it is time to bring the cows and calves home. We load up our horses into trailers and take them to the pasture where the cows are. We gather the cattle together and move them into a corral and into a truck which brings them back to the farm. The calves, which by now are almost as big as their mothers, are separated from the cows. We them haul the calves to the auction market where they are sold to feedlot owners who fatten the calves for beef. From now on the feedlot workers will be very busy keeping the calves healthy and growing.

During the winter months we feed the cattle grain and hay which are grown on our farm. The straw which the cows need for bedding is also from our farm. July is a very busy time for us because we have to cut the hay and let it dry for a few days before we make it into bales. If we get rain at this time it is not good because it spoils the hay.

As you can see, a calf is not just born by itself and grows up into a beef animal, without a great deal of work, worry and care by a farmer and his family.



Written by:

Sharon Cooke
Blackie, Alberta
T0L 0J0

A Day on Our Sheep Farm

A Day On Our Sheep Farm

We have a flock of 150 ewes on our farm. Our flock numbered 80 head last year which we bred to lamb in April. However last fall we bought 70 more ewes some of which are lambing now.

My husband and I have three teenage daughters. We don't have any year-round hired labour but we usually hire a student to help with haying, fencing or other jobs during the summer. The oldest girl in the family goes to high school in a town 40 kms away and must be up by 6:30 to catch the school bus at 7:15 am. The other two girls go to junior high in a village 13 kms away and catch the bus at 8:20 am. My husband goes outside to do the chores about 8:30 am and if I'm going to be home for the morning I do exercises to one of the T.V. programs before I do the housework.

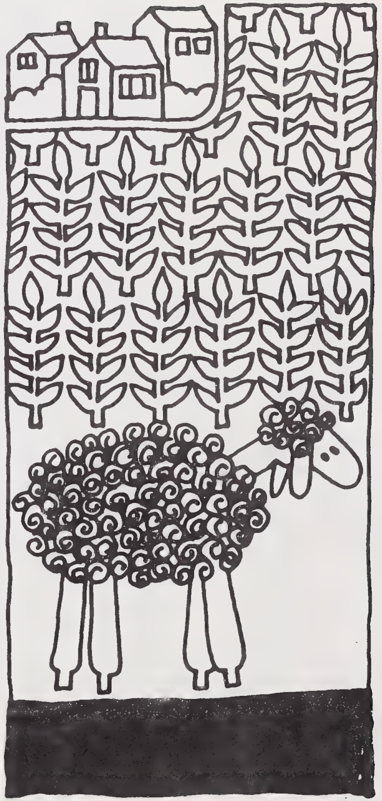
The chores consist of feeding hay to the ewes and grain and hay to the lambs in the feedlot. We feed out our own lambs and also buy lambs in the fall to finish during the winter. We only have 30 lambs left out of a total of about 330 head that we fed out. One pail (22 L) of barley twice a day is enough for 30 lambs.

We have the ewes divided into 2 flocks. The ones that won't lamb until April are fed hay in a small pasture. The ones that are lambing now are in a corral next to the barn. When a ewe lambs we put her and her lambs (we hope they all have twins) in a small pen in the barn for a day or two to get acquainted and to be sure the lambs are getting milk.

All the hay and grain for the sheep is grown on the farm but we have to go to the town 40 kms away to buy salt, mineral, vaccines or other supplies.

When the ewes are lambing we check them every 3-4 hours even through the night, especially if the weather is very cold. In May when the lambs have all been born they are all turned out to pasture. Later in the summer the lambs are weaned and put into the feedlot. When they get to weigh about 105 lbs we sell them. The prices for lambs are announced on the radio. We listen to CBC radio during the noon hour for market prices not only for lambs but for grain and other livestock.

I am usually out helping with the sheep during lambing, checking ewes, moving them out of the barn, eartagging lambs or cleaning up in the barn. The girls also help. They do the chores when we are away at meetings, doing business in town or curling or at other social activities. They also help when we weigh the lambs for market, or they might pack the wool fleeces into sacks when we hire people to come in to shear.



Written by:

Leslie Willocks
Blackie, Alberta
T0L 0J0

A Day on Our Irrigation Farm

People	This is a 2-family farm which also hires workers. Don, Louise, Frances (13), Jeffrey (12), Ken, Pat, Tom (6) and Scot (3) Alberts. Mel Rath, Vic Pederson - feedlot manager and worker. We also have casual labours for truck driving, etc.
4:00 AM	Don and Ken check the weather to see if its calm. If no wind they spray barley or corn for weeds. If windy - back to bed.
5:00 AM	Don and Louise get up - have coffee - read Bible and pray together. They discuss the days plans.
6:00 AM	Don meets Ken in north barley field to move the 2 half - mile wheel sprinklers. Little engines are started to move the sprinklers to the next setting. Louise reads, writes letters, works in garden or makes breakfast and school lunches.
7:00 AM	Don and Ken return from field for breakfast with families.
6:00 AM	Mel and Vic start feeding the cattle at the feedlot. They are fed a mixture of corn and barley silage, haylage (alfalfa) and hammered barley. They also walk through the pens to check the cattle for sickness or injury and to check if the waterers are working properly or need to be cleaned out. Any sick animals are put in the sick pen and treated. Cattle are weighed, branded and innoculated when they enter the feedlot. They are weighed when they leave and in between to check rate of gain. All feed is weighed for our records and for billing to our customers. The cattle are sold to packing plants on the rail grade system. All our produce grown including: corn, barley and alfalfa is fed to cattle in the feedlot.
7:00 AM	Frances, Jeffrey and Tommy get up, breakfast and prepare to catch the school bus to Brooks. They leave at 7:45 and return at 4:35. It's a long day considering we live only 10 miles from Brooks - a 15 minute trip by car.
7:45 AM	Louise leaves for Patricia (10 miles) where she is Principal of a 2 room country Elementary School. She does a lot of homework after 9:00 PM when Frances and Jeffery go to bed.
Day time Activities	Pat does all the record keeping for the farm and feedlot. This involves paying bills to machinery, fuel, feed, fertilizer, utility, veterinarian supply companies as well as payrole checks to all employees. Pat does inventory of grain, silage, cattle, and puts out a monthly financial statement on the IBM computer. She also does income tax and government forms.

Don and Ken check on feedlot activities and check the 4 pivot sprinklers to see that the pumps are working properly and the liquid fertilizer calibrations are working accurately. The corn is cultivated between the rows at this time of year also. They get the forage harvester and truck ready to cut the first crop of alfalfa.

Suppliers	Mail -	- we drive into Brooks to get it at the post office - No delivery.
	Fertilizer	- delivered from Green Acres in Lethbridge - we also use manure from feedlot - applied by custom operator in fall.
	Fuel	- Gas and oil delivered from UFA dealer in Patricia.
	Houses heated	- natural gas - we all members in Gas Co-op.
	Groceries	- bought in Brooks - 3 large grocery stores there.
	Machinery	- mostly John Deere - local dealer in Brooks.
	Vehicles	- mostly G.M. local dealers in Brooks - we have an independent mechanic service them.
	Clothes, Furniture, Stores	- we mostly buy locally in Brooks.

Community Activities

- Don is Chairman of Eastern Irrigation District Board of Trustees. This authority supplies water for irrigation farms and ranches and manages community pastures for the cattle of the area. Don has several meetings per month and travels to deal with governments.
- Don's family are members of Duchess Mennonite Church.
- Pat takes Scot to Nursery school Thursday morning in Brooks. While there she does books for the Brooks Toy Library and Nursery School.
- Francis plays Junior High basketball, Jeff plays Pee-Wee Hockey and Tommy takes skating lessons at the Brooks Recreation Centre. In summer the kids take swimming lessons there. Ken plays hockey, Ken and Pat curl.

Activity 24

FAMILY PORTRAITS: FARMERS

STUDY QUESTIONS: How would you like to be a scientist, a mechanic, a trucker, a weather forecaster, a mid-wife, and a manager - and a teacher a hockey coach, a nurse, an engineer, or a cook at the same time?

THE ACTIVITY

In this activity children do skits about farm people to portray the variety among them.

CURRICULUM AREAS

Language Arts

- Read a variety of materials: biographical sketches.
- Developing thought processes by writing: descriptions; expressions of feelings, emotions: journals, scripts, poems.
- Using creative dramatization and dialogue.

Social Studies

- Planning neighborhoods and local communities: Canadian communities today.

MATERIALS

Information sheets listing typical activities of people on various types of farms.

PROCEDURE

Journal Writing

Form groups based on the families listed on the information sheets. Have each child pick a member of the family and write freely, in a journal, about that person: what he or she might be like, how he or she might fit in the family.

Imagining

Have each group discuss their family cluster and develop a skit to reflect some aspect of the family's life - a behavioural sketch.

Conclusion

Perform the skits, recognizing and enjoying the variety of behaviours and personalities presented.

RELATED ACTIVITY

Have each group make individual pencil sketches portraying the family members whose parts they play in their skit; encourage the groups to also sketch group portraits of their imagined families. Have the children compile the sketches in a family album and add inscriptions to identify family members and their roles.

Above - Mom helps Dad give the calf a needle.
Below - Dad shows Jamie how to make his calf stand still for inspection.

Activity 25

VACATION ON A FARM

STUDY QUESTION: What would it be like to spend your summer on a farm?

THE ACTIVITY

In this activity children make brochures about farm vacations.

CURRICULUM AREAS

Language Arts -

- Communicate orally: reports.
- Use appropriate forms of written language: brochures.

Social Studies - Planning neighborhoods and local communities: Canadian communities today.

MATERIALS

Information sheet about Alberta farm families who welcome guests on their farms.

PROCEDURE

Preparation

If the school is in a city some of the children may have relatives in the country and could tell about holidays spent there. If the school is in the country, some of the children may know of guest farms, or they could recall highlights of their own summers at home. List a few of the highlights of a summer on a farm.

Making brochures

Have the children work in groups to draw up brochures advertising farm vacations. Their discussions will serve as the basis for their brochures.

Conclusion

Display and view the brochures, noting similarities and differences in emphasis among them.

RELATED ACTIVITIES

Some of the children may have lived on farms in other countries and may be willing to tell about their lives there. Or their parents or other relatives may be willing to do so.

Vacation on a Farm

Travel Alberta provides a brochure, "Alberta Country Vacations", which includes information about farm and ranch vacations.

The following types of information are included in the brochure:

- Where the farms are.
- Contact persons.
- What kinds of activities are offered.
- Prices.
- Dates of operation.
- Age groups accepted.

The telephone number for Travel Alberta is 427-4321 in Edmonton.

Unit 6 - Plants and Food

INTRODUCTION

The purpose of this unit is to offer opportunities for children to explore the variety of common food products that originate on vegetable and grain farms. We intend that through identifying a number of common Alberta crops and some of their products the children will begin to recognize the degree of interrelatedness among rural and urban communities.

Several of the questions guiding the selection of activities for this unit are listed below:

1. What are the major crops of Alberta?
2. What are their characteristics and values?
3. What common foods are made from them?

OBJECTIVES

1. To identify some of the vegetable and grain plants we use for food.
2. To observe and record the growth of plants, from seeding to maturity.
3. To explore the relationships between grains and vegetables and processed foods.
4. To participate for a while in the processing and distribution of plant products.

Soon these will turn orange. Do you like pumpkin pie?

Activity 26

MAKE A CALENDAR

STUDY QUESTION: Which vegetable or grain do you eat in summer? fall? winter? spring?

THE ACTIVITY

In this activity the children make a calendar that highlights agricultural plants.

CURRICULUM AREAS

Language Arts

- Communicate orally using various forms: conversations.
- Use appropriate forms of written language: illustrations.

Science

- Plants and animals: observe and describe characteristics of plants.

MATERIALS

- A selection of paper and light cardboard to suit your calendar designs.
- A number of calendars to examine as models.
- Illustrations of agricultural plants.

PROCEDURE

Have the children work in pairs or threes depending on class size, each group preparing an illustration for a specified month.

Conversation

They may want to add inscriptions e.g. interesting facts about the plants. If the children work with black and white drawings, the calendar can be duplicated if desired.

Conclusion

Assemble the calendar. Have a brief show in which the children reflect on changes in eating patterns with the seasons. Consider offering copies of the calendar to other classes in the school.

RELATED ACTIVTIES

1. Do a survey in the school - a "street interview" approach - to determine the most and least popular vegetable or grain product. Have the children ask both what a person's favorite vegetable or grain product is and where it is produced - especially whether or not it is in Alberta.

2. Read books about seasonal events on a farm-e.g. Alice and Martin Provensen. The Year at Maple Hill Farm. New York: Atheneum, 1978.

Spring

Summer

Autumn

Winter

Activity 27

GROWING PLANTS

STUDY QUESTION: How long does it take for a seed to sprout and what can I do to help it grow into a healthy plant?

THE ACTIVITY

In this activity children plant seeds in two different soils and tend the seeds as they grow into plants.

Note: This activity is recommended for March/April.

CURRICULUM AREAS

Language Arts

- Use appropriate forms of written language: simple charts.
- Communicate orally: reports; discussions.

Science

- Plants and animals: Observe and describe stages in growth of plants.
- Environment: Identify various parts of an environment and begin to infer their interdependence.

MATERIALS

- Information sheet on crops of Alberta.
- Child's log sheet.
- Packets of seeds.
- Soil.
- Ice cream, cottage cheese containers or coffee tins.

PROCEDURE

Preparation

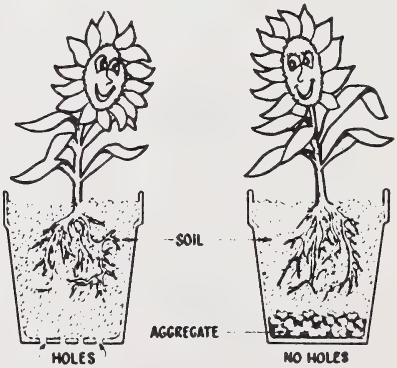
Distribute log sheets for growing plants and review the steps listed.

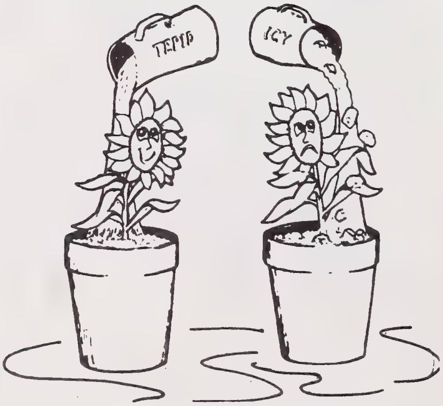
Divide the class into groups. Give each group a pot of soil and a packet of seeds to plant and tend over a number of weeks.

Equipment

If ordinary garden soil is used, rather than sterilized potting soil, it may be important to provide a product such as Damp-off to counteract soil fungus. Provide plant food if possible and allow the children to decide in their groups whether they want to use it in growing their plants.

Seeding Recording	Have the children plant their seeds and record on their log sheets what they did. Have them also write in the farming steps corresponding to their own.
Conclusion	Briefly discuss daily maintenance encouraging each group to work closely together on a daily basis, to care for their growing plants. Identify and post a date (5-6 weeks) for a class conference when the groups will report on their crops.
Followup	At the appointed time for the conference have the groups display their plants and share their progress in caring for them. Note differences in size and appearance of plants and in the appearance of the soils. Briefly discuss possible reasons for these differences, emphasizing the importance of good soil, adequate moisture and sunshine, and weed control in crop production.
RELATED ACTIVITY	Obtain samples of several different types of soil - e.g. garden soil, potting soil, sand, clay. Have the children compare them visually and by touch when they are dry and wet. Briefly discuss the likely influences of these differences on plant growth - and on grain quality and price.





Crops of Alberta

Cereals and Oilseeds

Wheat

-Major Alberta crop.
-Uses about 20% of Alberta's occupied farmland.
-About 25% of total crop cash receipts.
-Several classes of wheat-grown best in different areas and used for differing purposes: bread, pasta, baking, flour.
-The Canada Wheat Board controls quotas and deliveries to elevators and sells the wheat.

Barley

-2nd largest acreage
-2nd highest crop cash receipts; about 15% of total.
- About 50% used as livestock feed.
-2nd main use: malting.
-Some also used as a soup cereal and for flour.

Oats

-Minor cash receipts but impt. crop.
-Most used as feed for livestock.
-Best used for race horses and making oatmeal.

Rye

-Small cash receipts.
-2nd to wheat as source of flour for bread making.
-Also used for producing Alberta whiskey.
-Used in some cereals e.g. Sunny Boy.
-Main use is for animal feed.

Canola

-3rd highest crop receipts; about 10% of total.
-Mainly valued for its edible oil; accounts for much of edible oil used in Canada vegetable oil, margarine, shortening.
-Valuable by-product of oil extraction is a high-protein meal for animals.

Flax

-Uses small proportion of Alberta farmland.
-Mainly oilseed flax grown in Alberta: for linseed oil. (Fibreflax, for manufacture of linen, may be grown in future.)
-Linseed meal, a by-product of oil extraction: popular livestock feed.

Crops of Alberta

Vegetables and Special Crops

Potatoes

Largest vegetable crop in Alberta.
50% used for processing:
- fries
- dehydrated granules
- chips
- canned potatoes

Carrots

Second to potatoes; an expanding industry

Peas

Alberta a major exporter of processed peas

Small Fruits

- Strawberries
- raspberries
- saskatoon

Special Crops

- Corn
- Beans
- Mustard

Other Vegetables

- Cabbage
- Onions
- Lettuce
- Parsnips
- Beets
- Rutabaga
- Mushrooms
- Tomatoes
- Cucumbers

- A variety of vegetables are grown commercially by market gardeners and greenhouse operators.
- Some crops are produced by contracts between growers and processors.
- Major potential is in increased demand for fresh vegetables. Many are sold at farmers' markets or at farm gates. Many are sold to retailers and wholesalers and to processors.
- Greenhouses produce mainly bedding plants, flowering plants, and seasonal specialties such as pointsettas and lilies.

Crops of Alberta

Forage Crops

Alfalfa

brome

fescue

Although bales of hay are a common sight in many parts of Alberta, large amounts of forage crop seeds are produced in the northern areas of the province, especially in the hilly areas of the Rockies.

Forage crops are used primarily for animal feed and for pasturage after the seed is harvested. They make up 70 - 80% of food rations for ruminant livestock.

Forage crops also restore valuable nutrients to the soil and thus help farmers maintain the productivity of their soil.

Log Sheet: Growing Plants

Keep a diary about your plants as they grow. Write down what you do and what you notice. Also write your thoughts about the project - how do you feel as you watch your plants grow?

Growing My Plants

Step 1: Loosen soil

Step 2: Prepare holes, plant seeds, cover seeds

Step 3: Care for plants - water, food (fertilizer), sun, weeding

Date:

Date:

Date:

Please continue!

Activity 28

TAKE A PLANT QUIZ

STUDY QUESTION: Can you tell which plants are used to make your favorite food?

THE ACTIVITY

In this activity children identify the links between some of their everyday foods and crops of Alberta.

CURRICULUM AREAS

Language Arts

- Read a variety of materials: pictures.
- Use contextual analysis to predict words.

Science

- Plants and animals: Classify plants and animals in various ways, e.g. uses.

MATERIALS

- Quiz on plants.
- Samples of semantic maps.

PROCEDURE

Predicting

Distribute quiz sheets. Have the children do the quiz individually or in pairs. Compare responses, noting both similarities and differences among children's favorite foods.

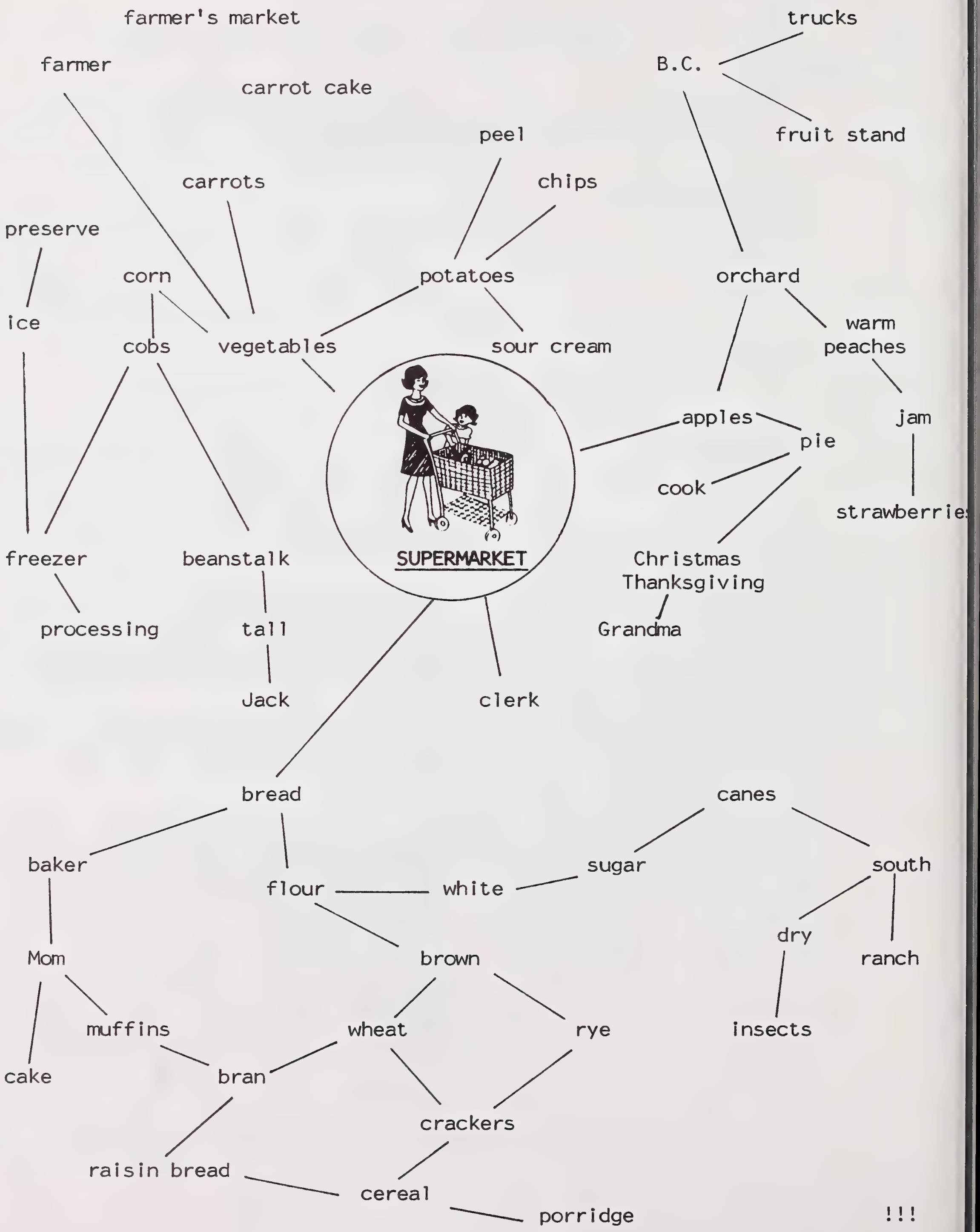
Conclusion

Use simple flow sheets to review the connections suggested in each item, noting the variety of people and jobs included in the processing of these foods.

RELATED ACTIVITIES

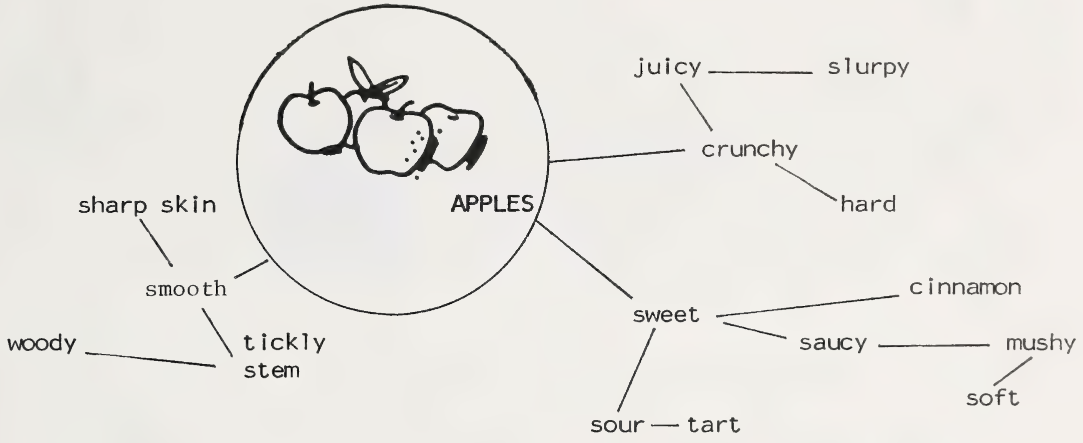
1. Have the children work in pairs to develop additional items for a class quiz done orally.
2. As a class do a brainstorm of the word "supermarket" or some other word centrally related to plants and plant products. Record the associations in a semantic map. A simple example is illustrated in the resource section but children's associations are likely to differ in accordance with their individual experiences. Briefly summarize the results, emphasizing the extended meaning of the central word and the interconnections among the individual words in the map.

Brainstorm: Semantic Map

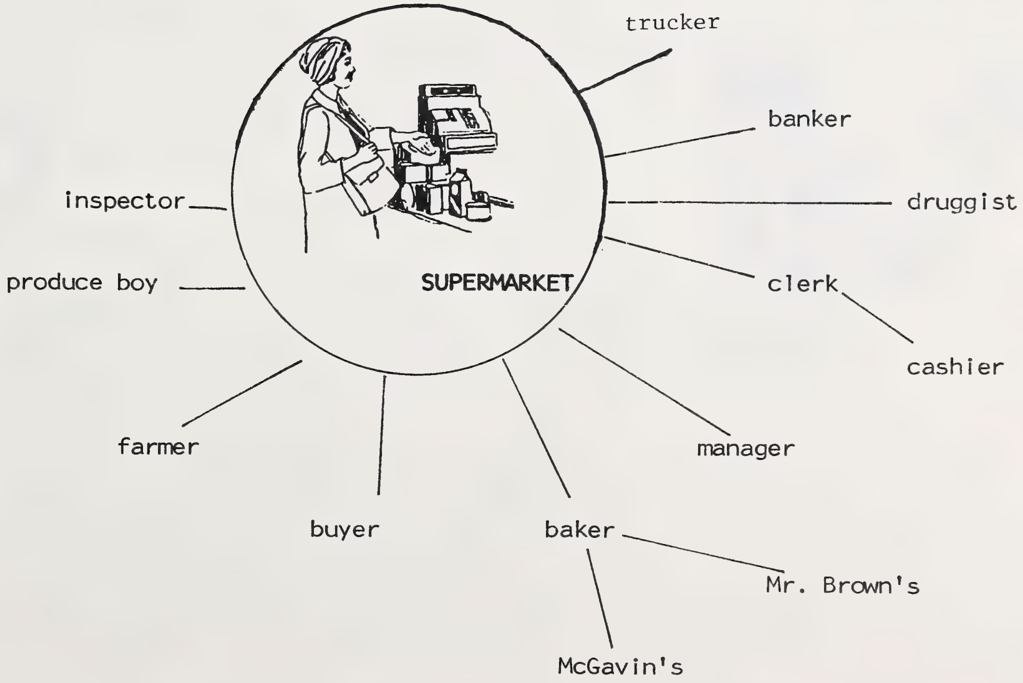


Focused Brainstorm:

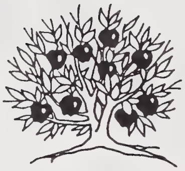
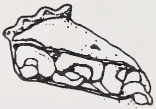
Taste and Texture

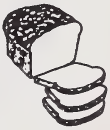
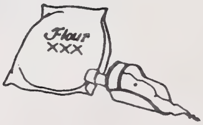


Focused Brainstorm: Jobs

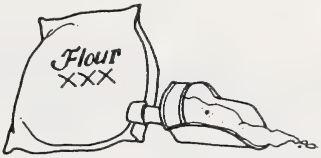


Plant Quiz

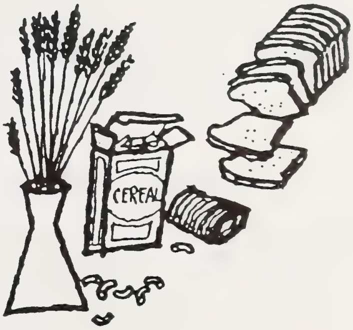
1. What does your  have in common with your piece of  ?

2. What does  have to do with  ?

Plant Quiz



3. What do you eat every day that contains



4. What is the same about these products ?

Plant Quiz

5. What is the connection between this

and this ?

6. What is your favorite cereal?

7. What crop does it contain?

Activity 29

PLANT RHYMES

STUDY QUESTIONS: Can you fiddle with each riddle and find its finishing word?

THE ACTIVITY

In this activity the children read riddles and rhymes about plants and identify a missing word in each one.

CURRICULUM AREAS

Language Arts

- Appreciate rhythm in language.
- Use contextual and phonic analysis to identify words.
- Discriminate similarities and differences of sounds/visuals.
- Read a variety of materials: riddles and verses.

Science

- Plants and animals: Describe and classify plants ir various ways.

MATERIALS

- Sheet of rhymes and riddles about plants.
- Answer sheet.

PROCEDURE

Reading/listening

Distribute copies of the rhyme sheets. Have the children work in pairs to read the verses to each other so as to hear the rhymes and complete them.

Conclusion

Write some of the rhymes on large chart paper. Have the children read them chorally.

RELATED ACTIVITIES

1. Have the children illustrate the verses.
2. Brainstorm sensory words related to processing, selling, or eating agricultural products and use these for writing additional riddles or simple verses to read together.

Plant Rhymes - Answers

1. away
2. me
3. gravy
4. hour
5. round

Plant Rhymes

An apple a day

Keeps the doctor ________________.

Tomatoes and cabbage have vitamin C;

They are both good for ____________.

Insides of mushrooms are soft and wavy;

We use mushrooms in our ______________.

Wheat and rye are ground to flour;

Baker's use them every ___________.

Carrots grow beneath the ground;

They are slender, long and _________________.

Activity 30

BAKE SALE

STUDY QUESTION: How many different grain and vegetable products do you put into your favorite goodies?

THE ACTIVITY

In this activity the children will bring baked items for display and sale at school.

CURRICULUM AREAS

Language Arts

- Read a variety of materials : recipes.
- Communicate orally: conversations,
- Listen to various forms of spoken messages: instructions.
- Use appropriate forms of written language: lists; labels.

Science

- Properties of matter: Observe and describe matter undergoing changes.

MATERIALS:

- Boxes for holding money.
- Child's data sheet on plant products used in baking.

PROCEDURE

Ask the children to work with their parents to prepare goods for a bake sale. Ask the children to record what plant products are used in their baking - e.g. oil, flour, oatmeal. Encourage them to also record the grain or vegetable sources of the products - e.g. oil from sunflowers or canola, flour from wheat, oatmeal from oats.

Recording

The children could use copies of the simple data sheet provided.

Labelling

Have the children prepare labels to display with their baked items at the sale. Have them indicate the prices of their items and some interesting facts or comments about them,related to plant products used in the baking. If the funds are earmarked for some class project the children could make a sign about it as well.

Conversations

Hold the sale; count the earnings.

Conclusion

Briefly discuss the event. Identify it as an experience in food processing and distribution.

RELATED ACTIVITIES

1. Use bakery products such as flour, cereals, nuts, vegetables, or oils to do science projects involving the measuring and comparing of weights and volumes of samples of different kinds of matter.

2. Have the children write paragraphs about their baking experiences. Prepare for the writing by listing on the board either some of their recollections or several questions such as the following: How did the dough look during mixing? How did it feel? How did the baked goody smell? Taste? Share the compositions.

3. Do a baking project in class. Include selection of a recipe, shopping, baking, cleaning up and eating.

Data Sheet:

Plant Products Used in Baking

Plant Product	Source
Example: Cooking oil	sunflowers or canola or corn

Put a star (*) beside each item grown or produced in Alberta.

GLOSSARY

The words in this glossary are presented in categories which are related to the activities in the handbook. The explanations of the terms are not intended to be comprehensive definitions; instead our goal is to emphasize agricultural usage and especially to highlight the way the terms are used in this handbook.

Animals

animal - a living being - e.g. dog, horse, hog.

bee - an insect which collects nectar and produces honey. Bees are housed in hives and farmers collect the honey.

broiler - a chicken or turkey raised for meat; killed at less than half mature weight.

brood hen - a chicken that is used to keep eggs warm for hatching.

calf - a baby cow or bull.

cattle - more than one cow.

chick - a baby chicken.

cow - female bovine (cattle); some used for milk and some for meat.

goat - a small animal used for milk, meat and in some cases wool.

goose - a long-necked water bird; feathers used for stuffing in pillows, quilts, jackets.

hatch - the emerging of the baby chick from the incubated egg.

herd - a large group of cattle or goats.

hooves - hard horny feet on some animals - horses, cattle, goats, sheep.

horn - hard bony projection from the head of an animal.

horse - an animal which is used for riding or farm work; farm work includes stock handling and in the past pulling loads (draft).

kid - a young goat.

lamb - a baby sheep.

oxen - cattle used for draft purposes in pioneer days.

pet - an animal kept for the pleasure of its owner.

piglet - a baby pig.

poultry	term used for farm birds - includes chickens, turkeys ducks and geese.
sheep dog	a working dog used to control and herd sheep.
stock	animals kept on the farm for production purposes.

Buildings or Areas

barn	a building used to shelter animals. This is usually totally enclosed.
bin	a storage building for grain or feed.
corral	a fenced-in area for animals.
dairy	a farm where cows or goats are kept for the production of milk.
elevator	a building or terminal where farmers bring their grain for storage - or where grain is elevated and transferred to an alternate mode of transportation: truck to rail; rail to ship.
farm	an establishment or plot of land where food products are grown.
farmstead	area that includes the human dwelling and other buildings which are often a part of a farm.
farmer's market	a place where farmers or producers sell their products directly to the consumer.
hatchery	a building that has specialized equipment for incubating and hatching poultry eggs.
milk parlor	a place separate from the barn where cows are milked.
mixed farm	a farm which produces a variety of products for sale - e.g. grain and hogs.
modern farm	a farm which uses contemporary techniques and equipment

pasture - an area of grassy land where farm animals range and feed.

pen - a stall for an animal.

shelter - a building or other structure which is used to protect animals from weather; animals usually go in and out on their own.

silo - storage building or pit in which green hay or high-moisture grains are fermented and stored as animal feed.

supermarket - a place where food produce and other items are on sale to consumers.

Equipment

baler - a machine used to compact and package roughage such as hay or straw.

equipment - material or apparatus used in farm production and operation - e.g. machines, gas tanks.

grain auger - a machine used to move or elevate grain from one place to another - e.g. from a truck to a bin.

incubator - an apparatus used to keep eggs warm while hatching.

machine - a mechanical apparatus used to assist the farmer with his work.

mechanization - the use of machines to replace hand labour.

sheep shears - clippers, usually electric, used to cut the wool from the sheep.

tractor - a machine used to pull implements and do other work on the farm - most common farm machine.

milking machine - an apparatus which attaches to a cow's udder and sucks the milk into a holding tank.

combine - a machine which moves down the grain field separating the seeds from the stems of ripe plants.

tillage - the operation of stirring, turning (plowing) or firming the soil to kill weeds or to prepare a seedbed.

General Terms

agricultural	-	anything having to do with farming (raising crops or livestock for food or fibre) or the agriculture industry which includes marketing, processing, and trade in these products.
commercial	-	an enterprise designed to generate income.
environment	-	the immediate surroundings of a plant or animal which influence its well-being.
exhibit	-	an article, plant or animal which is placed on display.
fair	-	a gathering where exhibits are displayed and judged.
rural	-	a place or person or thing which is related to the country or sparcely populated area.
seasons	-	the natural times of the calendar year when weather changes affect the growing of plants and the behaviour of animals.
soil	-	earth - the top layer of the ground which supports the growth of plants.
urban	-	refers to city, town or densely populated areas in contrast to rural.
weather	-	the changing climatic conditions such as rain, sun, and temperature that affect agricultural production.
yield	-	the quantity of crop produced usually per unit area.

People

auctioneer	-	a person who solicits bids for and conducts a public sale of farm animals or equipment.
baker	-	a person who uses the products of farm plants, especially grains and oils, to produce bakery products for sale to retail or wholesale outlets and to consumers directly.
clerk	-	a person who works in a food store, bank, office or any setting where products or services are exchanged.
consumer	-	a person who buys things for his own use - usually items that he can't produce for himself.

farmer - a person who operates a farm.

inspector - a person from a marketing agency or the government who evaluates a farming operation or product according to standard guidelines.

judge - a person who evaluates and scores or rates exhibits.

trucker - a person who transports animals or farm produce by truck to market, between farms, or to other destinations.

veterinarian - a person who takes care of the medical needs of animals.

Plants

barley - a grain used primarily for animal feed; also used for making beer.

canola - a pod crop whose seeds are used for making cooking oil.

cereal - refers to crops grown for grain - e.g. oats, barley, wheat, rye, corn; also a processed form of breakfast food.

chaff - the empty pods or scale-like seed covers which are separated from the grain in a threshing and cleaning operation.

chop - ground grain used for animal feed.

cleaned seed - seed which has been screened to remove weed seeds and chaff.

crop - plants grown for sale.

ear - the entire head of corn including the cob, husk, and silks.

fruit - the mature seed-bearing product of a plant - e.g. apple.

garden - a plot of land used to raise food-producing plants or for esthetic purposes - e.g. rose garden.

germination - the point at which a dormant seed begins to sprout forming a new plant.

graded seeds - seeds evaluated and tested for size and condition and rated from good to poor.

grain	-	the edible seeds from grassy-like plants such as wheat, barley, oats, rye.
grass	-	a narrow-leafed plant which we grow on lawns and is used for pasture or grazing material for animals.
harvest	-	a time for collecting the produce from plants and animals on a farm.
head	-	the portion of a plant which contains the seed - as in grain or grass.
kernels	-	the individual seeds from stalks of grain.
legumes	-	a group of plants that have large pods containing seeds that split when they are ripe; used for food and forage - e.g. peas.
moisture	-	(for germination) - the water required by a seed to sprout and later to sustain life.
oats	-	a grain used primarily for animal feed; some used for cereal.
plant	-	a living organism that usually has no locomotion; has roots, cellulose cell walls, and has capacity for indefinite growth.
pod	-	the container for seeds on a legume plant.
ripening	-	the process of maturing in plants resulting in seeds that are fully developed and can be used to grow new plants.
rye	-	a grain crop used for bread flour and to a large extent for animal feed.
seed	-	the reproductive portion of a plant. Many seeds are used for animal and human food.
sprout	-	the earliest emergence from a seed as it begins to germinate or grow.
stalk	-	the straw or stem-like part of the plant that supports the seed head.
stem	-	the stalk of a plant.
temperature	-	a factor in the germination and growth of seeds. Most seeds have minimum temperature requirements for germination and growth.
vegetable	-	a plant usually grown in a garden for human food - e.g. potato and carrot.
weed	-	a plant growing in a place where it is not wanted by man.

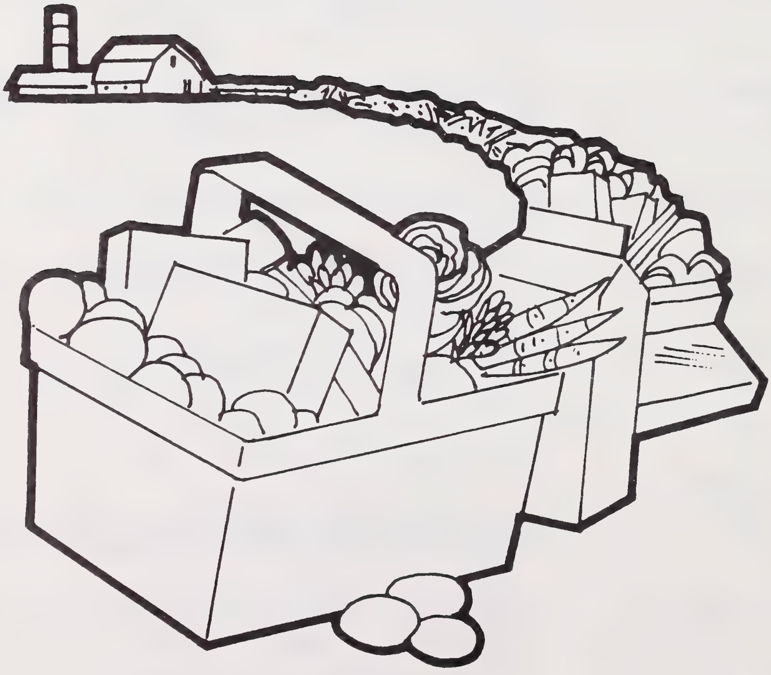
Process or Procedure

care	-	providing the necessities for a living thing - e.g animals; food, water, and shelter.
food processing	-	operations which are done to prepare food for storage or sale - e.g. canning, freezing.
growth	-	the development and maturing of a plant or animal.
harvesting	-	the collecting of produce from a crop.
irrigation	-	providing extra water to growing crops in a dry area.
inoculation	-	using a needle to give an animal or plant a substance to prevent or cure disease; also introduction of selected strains of nitrogen-fixing bacteria into legume seeds.
production	-	the process of raising plants or animals and preparing them or their by-products for sale.
spraying	-	sprinkling plants evenly with a mixture of chemicals and water intended to feed plants or prevent the development of weeds or insects.
stages	-	identifiable steps or degrees of development of plants or animals - e.g. seedling, growing plant, flowering plant.
swathing	-	cutting grain and leaving it to lie in rows on the stubble to dry.
threshing	-	the process of removing the seeds of a plant from the stalk and the shell or chaff.
weed control	-	the elimination of unwanted vegetation from a crop thus reducing the competition for nutrients and water.

Products

bread	-	a food baked from wheat and/or other grains and used most commonly for sandwiches or toast.
by-product	-	a substance which is used in addition to the main product - e.g. glue is made from animal hooves.
cheese	-	substance made from milk solids.
egg	-	rounded hard-shelled body which can be used for reproduction or consumed as food; comes from poultry.
flour	-	cracked or powdered grain used in baking.

fresh	-	produce which has not undergone processing, such as freezing or canning, to change its form.
honey	-	a sweet liquid made in the hive by bees.
milk	-	a white liquid produced by a mammal to feed its young. We drink milk of cows or goats.
product	-	something produced through growth or labour - e.g. meat from animals; vegetables; flour; tomato sauce.
wool	-	the hairy coat on a sheep or goat used in the manufacture of garments. This is cut off each year.



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